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ABSTRACT

This report is comprised of papers written for the 1976 conference of the National Association for Physical Education of College Women. The central theme of the conference was changing trends in physical education for women, how they influence the teaching of physical education in college, and their impact on attitudes toward women in sports. (JD)

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Report of the 1976 Conference

June 3-8

ASILOMAR STATE CONFERENCE GROUNDS
PACIFIC GROVE, CALIFORNIA

REPORT OF
THE 1976
CONFERENCE JUNE 3-8

ASILOMAR STATE CONFERENCE GROUNDS PACIFIC GROVE, CALIFORNIA

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HIGHER EDUCATION IN TRANSFORMATION

Keynote Address

THE RECASTING OF EDUCATION

President Richard W. Lyman
Stanford University
Palo Alto, California

As, in looking forward to this occasion, I contemplated your theme, Higher Education in Transition, I was naturally moved to think of those familiar words of our common ancestor, Adam, addressed to our other common ancestor, Eve (or was it the other way around?), as they were departing under orders from Jehovah from the Garden of Eden: "Well, my dear, we live in an age of transition." Right at the moment we are all even more than usually conscious of the problems of change-over-time because of our country's Bicentennial.

Our celebration of this anniversary seems full of ambivalence, despite (or perhaps partly *because* of) all the red-white-and-blue Dixie cups, pullman cars, even trash cans. There is a feeling of nostalgia for "The World We Have Lost," a certain yearning for greater simplicity in our lives, in our culture, in our institutions. There is, I think, also an uneasy feeling that if we had today to produce all over again the Declaration of Independence, the American Revolution, and the Constitution of the United States, we might find ourselves a bit short of the George Washingtons, Thomas Jeffersons, and Benjamin Franklins whom we would need.

This is so despite our possession of a far more impressive array of institutions for educating people—including national leaders of *both* sexes — than we had in 1776. There were at that time only nine colleges in the entire country; all were for men only, and none were universities, with postgraduate work, a commitment to research, or complex curricula. The colleges' first, though not their only duty, was to prepare young men for the clergy. The largest graduating class at Harvard before the Revolution counted 63 members (in 1771); the total number of living graduates of American colleges in 1776 has been estimated at 3,000. The 16-year-old Benjamin Franklin railed at the sons of the rich attending Harvard, "where, for want of a suitable Genius, they learn little more than to carry themselves handsomely, and enter a Room genteelly...."

As Dick Atkinson, my Stanford colleague who is doing a stint as second in command at the National Science Foundation, pointed out recently, we have nearly three times as many people attending colleges and universities today as we had total population of the United States at the time of the first census, in 1790. According to a recent Carnegie report, the

states of California and New York each enroll more college students than any other nation in the world except Japan.

That may seem a somewhat sobering thought; we may just possibly be overdoing things a bit. But, nostalgia aside, there is assuredly no way of returning to the relative simplicity of life and institutions in the 18th Century. And it's just as well to remember some of the less attractive aspects of that much simpler society, such as uncontrollable infectious diseases, human chattel slavery, and hardships even for the rich that would appall even the poorer citizens of the U.S.A. in 1976.

It is difficult to relate ourselves to the past, all the more so because the pace of change has become so unprecedentedly rapid. As the historian, Arthur Schlesinger, Jr., has said, "Nothing defines our age more than the furious and relentless increase in the rate of change. Science makes, dissolves, rebuilds and extends our environment every day. The planet has changed more in the last hundred years than in the thousand years preceding...." In most ways we are really a great deal farther removed from George Washington's generation than they were from that of Christopher Columbus.

But if it is hard to relate to the past it is still more difficult to relate to the future; the technology of the crystal ball remains primitive, for all the pretentious posturing of "futurologists."

It might be worth pondering how recent, in the long history of humankind, is the very idea of trying to relate to or prepare for the future, except in individual terms — preparing to be a lawyer, or preparing to meet death by appropriate spiritual exercises and devotions. As for the idea of being able to control or even to influence significantly the future development of the whole society, that is more recent still.

I believe, in fact, that we Americans have become somewhat oversold on the notion that such control is possible. The ancient Greeks had a word for our state of mind on this subject; they would have called it hubris — overweening pride or arrogance. Of course they lacked our advantages, such as television, computers, or the omniscience of Howard Cosell. But they had a point. Our belief that we can strongly influence, and perhaps partially control, the future of our society has consequences that are not all in our favor. For when, as inevitably happens rather frequently, things don't work out as we had anticipated, we feel a corresponding sense of betrayal.

My first suggestion to you, then, this morning is that we hurt ourselves by our tendency to oscillate between hope and despair, between illusion and disillusionment, between exaggerated confidence in our capacity to shape the future and unjustified cynicism when that confidence once again proves to have been misplaced.

My second suggestion is really related to the first: we have come to expect more from our social institutions than they can ever provide. It is currently popular to make this point in relation to government, especially the Federal Government. Governors and ex-Governors of States are running hard for the Presidency on the basis of this argument; they are trying to win possession of the highest office in the land for the express purpose, so they say, of diminishing its pretensions.

But I would extend the point much farther. It is not just from the institutions of government that we expect too much; it is from all institutions, social, economic, cultural, educational — not just political.

This is unfortunate from several aspects. It tends to diminish the sense of personal responsibility; we expect our institutions, not only to supplement individual efforts but to replace them, more often than is healthy for the society, let alone the individual.

And again, when our exaggerated faith in the capacity of institutions to change our lives for the better proves unfounded, we tend to react as if we had somehow been betrayed. Instead of blaming ourselves or our over-confidence we conclude that the game must have been rigged, someone must have turned traitor, the leaders of institution never meant what they said, and so forth.

Currently we are going through something of a wave of disillusionment with regard to educational institutions at all levels, including higher education. It does not carry with it, perhaps, the rage and the energy of the late 1960's. The great Clausewitz defined war as the extension of politics by other means. What we are seeing now is perhaps the extension of the '60's rebellion against colleges and universities by other means, by state regulation and law suits and press exposes and books such as Caroline Bird's *The Case Against College* rather than by sitting in the President's Office or hurling rocks through the Dean's window.

This disillusionment is in part simply an aspect of the more general loss of faith in our institutions that has marked the last several years in American history. From labor unions and business corporations to the military and the courts, their stock is down. The *relative* position of higher education in the hierarchy of institutions valued by Americans does not appear to have slipped appreciably.

But in higher education, as in many other areas, I suspect that the depth of the disillusionment today is closely related to the excessive expectations that we have entertained in the past as to what higher education can do for us. Education was to be the magic key to an ever-growing gross national product, ever greater social justice, a richer life for each individual, not to mention the preservation of the American way of life. (Just by the way, while I was never especially enamored of that phrase, "The American Way of Life," the fact that we don't hear it spoken very often any more is surely a sign of our national loss of self-confidence.) Education could provide jobs, eradicate poverty, salvage lost souls, and cure cancer; the rest would come later.

Now of course education is not *ir*relevant to any of these problems. But it is not a panacea for them, either.

It often seems to those of us who are charged with responsibility as chief executives of colleges and universities that we have quite enough to do solving our *internal* problems, without trying to make of our respective institutions the universal saviors of society.

We have been criticized for this. We have been accused of withdrawal from our national responsibilities, of failing to do our part to fill the leadership vacuum in American life, in short, of being pygmies compared to the giants who once occupied our chairs — the Charles William Eliots, William Rainey Harpers, David Starr Jordans, or, a bit later, the Robert Maynard Hutchinses. (Have you ever asked yourself why in the age of great university presidents every such hero was required to have, and apparently to use, *three* names?)

Perhaps there is something to these charges. But I still have the feeling that we ought to solve our own pressing problems first, and that if we were to do so we would be playing our proper part in solving the nation's and the world's as well. For many of our internal problems are extensions or reflections of those that the wider society is likewise facing.

Not all of our solutions will be exportable; colleges are unique institutions, not quite like any other. But unless *we* are good employers, unless *we* are not polluters of the environment, unless *we* find acceptable ways to achieve equity among ethnic groups or between the sexes, we cannot very well expect that the rest of the world will heed our advice or follow our example.

Let me spend a few minutes following up one of the leads that I have just suggested — equity between the sexes. In this, as in many questions, higher education cannot hope to provide 100% satisfactory solutions. But we ought to be setting a better-than-average example. It would be a bold soul indeed who would claim that, up to now, we have done so.

There are few areas of our institutional lives in which the problems of equity between the sexes are more interesting or more significant, in terms of impact on the overall situation, than athletics, physical education and recreation.

If I make a few observations on this, let me do so with an initial disclaimer: I'm no kind of expert in these matters. My only excuse for venturing into the subject is that I'm not entirely sure who or where the experts really are, and that in any case for solutions to work they will have to be convincing to the general run of us amateurs. The experts won't be able to go it alone.

Indeed, my main point will be the impossibility of anyone, or any of the various contending parties, going it alone. People in physical education and in intercollegiate athletics are going to have to coexist; people of both sexes in both enterprises — and in recreation as well — are going to have to avoid the kind of internecine warfare that all too often threatens to bring the whole effort into public disrepute.

My perception is that in the present situation there are a lot of people who feel threatened in one way or another. For example, at the NCAA Annual Convention in St. Louis last January — my first experience of one of those tribal rites, incidentally — it was quite obvious that the major athletic powers felt threatened by the smaller, and vice versa. It seemed also that the assembled athletic directors and at least some of the faculty athletic representatives felt threatened by the unprecedented attendance of some four score of college presidents — the first time in I don't know how long that college presidents have managed to make *anyone* feel threatened. And certainly the presidents felt, if not

threatened, at least outnumbered, and, at some crucial moments outvoted, by everybody else.

The NCAA as an organization seemed to feel threatened also by HEW and the looming shadow of Title IX.

As usual in such situations, various attempts were made to use these threats, either explicitly or implicitly. NCAA attorneys tried to convince the assembled delegates that Title IX required that the Association become, as quickly as possible, the *only* regulator of intercollegiate athletics for both sexes. To many of us, this appeared to be a rather thinly veiled move towards a takeover of the Association for Intercollegiate Athletics for Women. (The fact that AIAW's annual meeting was held 1,270 miles away on overlapping dates might be taken as a symptom of the problem. I believe that Stanford's Athletic Director was among the very few who tried to attend as much as possible of both conventions, incidentally.)

There is no denying, either, that we college presidents used the threat of Title IX requirements to argue for more effective efforts to economize in intercollegiate sports. At least that threat was honestly invoked, for we foresee a sizable dollar crunch when, from a resource base that isn't likely to grow very much, we'll have to spend (most of us gladly, I hope) a lot more money on women's programs.

It is impossible to eliminate all of the reasons for feeling threatened; we are not going to reach the high plateau of equity without some strain and some genuine conflicts of interest along the way. But we face something of a dilemma here. For, generally speaking, people who feel threatened do not behave at their most rational best. "Be reasonable, or I'll slit your throat," doesn't work very well as an inducement. In situations of great tension between groups, the search for common ground is quickly abandoned by all but the very hardy and persistent. And, more often than not, when one comes to know those hardy and persistent souls one realizes that they are the ones who have not *allowed* themselves to feel threatened. They are the ones who can afford to understand the point of view of others because they have a sufficiently secure sense of who they themselves are and how they fit into the scheme of things not to have to worry if others are finding their proper place in the sun.

They are also the ones who know, either by experience or by instinct, that succeeding in the search for common ground is the essential key to resolving the tensions and achieving genuine equity. For the wider the common ground, the larger the number of *un*threatened people it can accommodate. Thus, in the question of equity between the sexes, it is in the long run interest of all concerned, I think, to reduce to a minimum the atmosphere of threat and counter-threat.

All very well, but how to do it?

I've four suggestions, all rather modest and practical, all fairly closely related.

First, we must guard against the danger of exaggeration. There is nothing in the published regulations to indicate that in fact Title IX is going to make us give enough so-called "full ride" grants in aid to women field hockey players to match, one for one, the grants given to male football players. What the regulations do state is that women athletes as total group must receive grants in aid in substantially equal proportions, both as to numbers and dollar amounts, to men as a total group. If half of all your male athletes are on half-scholarships, so must half of all your female athletes be. This will be expensive enough for many of our institutions, heaven knows. But nothing is gained by trying to terrify the male animal, subspecies athlete or foi ower of athletes, with nightmare visions of a horde of Amazons armed by Secretary Mathews and bent on their destruction.

Second, we must not succumb to panic at the discovery that there are genuine conflicts of interest and differences of interpretation among us in the matter of equity between the sexes. Even within the world of *women's* athletics and physical education, as I hardly need tell you, there are conflicts and differences of opinion that run deep. There is no magic formula for determining the right balance of effort and resources among intercollegiate athletics and physical education and recreation. At one extreme we can perhaps agree that to give attention only to intercollegiate athletics means to ignore the value of sports involvement for the many, and thus to deprive large numbers for the benefit of small. But at the other extreme, expecting intercollegiate sport to subsist on what amount to the crumbs from physical education's table is unrealistic, and ignores the values that have long sustained men's athletics, even amidst excesses and corruption and commercialism. The obvious

yearning of many women athletes for their share of the attention will not be gainsayed.

We must face the fact that there is genuine difficulty in defining equity, as well as the host of practical problems in achieving it. Where, for example, does equity end and enforced conformity begin? Must men's and women's programs be mirror images of one another — an eye for an eye, a tooth for a tooth, a cleat for a cleat — before true equity can be said to have been achieved? On the other hand, how can we protect against the very real possibility that diversity may become the excuse for continuing inequality? We all know the ignoble history of the "separate but equal" doctrine in other contexts. Realism and as much calm as we can muster will be required of all of us as we strive to arrive at answers to these questions with which we can comfortably live.

Third, we must seek realism in the arrangements we make for solving the problem. At Stanford, by dint of considerable patient hard work we have achieved a single Department of Men's and Women's Athletics, Physical Education and Recreation — a cumbersome title but a genuine achievement. What we must now do is work to give full meaning to this amalgamation, and to avoid at all cost the folly of imagining that merely by combining the programs we have solved all the basic problems. All that we have is a better institutional framework for continuing to work at solving them.

Fourth, we must be careful to use the institutions that we have created rather than allowing ourselves to be used by them. This is a delicate matter, and I don't want to give rise to more sensational headlines of the kind that sports writers love — "Lyman Hits....," "Lyman Clobbers....," "Lyman Lashes Out...." But it is a fact of social existence that any organization that is not moribund will have, by definition, something of a life of its own. It will tend to develop some purposes and interests that do not exactly coincide with those of its members. When these come to light we are likely, once again, to face the problem of people feeling betrayed by the organizations that are supposed to serve them.

The only protection against this is reasonable vigilance; that is, vigilance to see to it that it's the members, and not the organization *per se*, whose interests are kept up front. But vigilance also against feeling paranoid every time the familiar fact that organizations do tend to develop their own agenda comes to light.

It seems to me probable that we shall not solve the problem of equity in men's and women's athletics until we have a single organization that deals with both. But a single organization must come about through merger, not by an act of institutional cannibalism. And, in my view, we shall need both greater candor and deeper mutual respect than we see now before a genuine and equitable merger is even conceivable.

At present, for example, I sense in the NCAA a very complex web of hopes and fears. At some points, many in the organization appear afraid to do anything that might cause offense to any women — an impossible hope, since women don't agree among themselves as to what's offensive.

At other points, there is insensitivity and even a willful blindness as to the predictable consequences of one's acts. At the January convention, resolutions were passed overwhelmingly to urge continuation of the effort at collaboration through a joint committee with AIAW. Within weeks of that meeting, however, the NCAA launched its law suit against HEW alleging the inapplicability of Title IX to intercollegiate athletics. And the AIAW broke off the joint committee discussions. Instead of the area of common ground being gradually broadened, it was, by this sequence of events, cut out completely — at least for the time being.

It is against this backdrop of reciprocal fears and suspicions in the realm of intercollegiate athletics that I applaud your effort, "unique in your organizational history," as Donna Mae Miller described it in her letter of invitation, to carry out joint professional endeavors, to which this Conference bears witness, with the National College Physical Association for Men.

You and your colleagues are dealing with sports and exercise and the development of physical skills at the deepest level, and also at the greatest level of generality. Your are in a strong position to do battle effectively against narrow and tradition-bound ways of thinking about these subjects. If it is in your hands to work against an overemphasis on intercollegiate athletics that threatens at times to overwhelm the academic enterprise entirely, so also it is in your hands to work against the kind of parochialism that says "sports are o.k. up to, and only up to, the point where athletes from one college want to compete against athletes from another."

If it is in your hands to see that women are assured their full share of the resources we devote to physical education, so also are you in a position to demonstrate that this can be done in constructive collaboration between men and women of good will, and not at the barricades.

The essential point is that we need each other, if our several contributions to the education of all Americans in the beginning of the nation's third century are to be most effective.

Thank you, and good luck.

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Future Days

FLIGHT OF FUTURE DAYS

Leona Holbrook
Brigham Young University
Provo, Utah

A month ago I stood on top of an extensive tell, a large man-made, multiple-layered mound of earth in one of the most ancient of lands, the Holy Land, and I looked down at a deep cut which had been made by archaeologists and their assistants through the earth and rubble and broken mortar. Twenty different layers of culture and habitations were there, some partially destroyed by fire or toppled by nature's destructive forces, each successively giving up its identity, covered over by man or by dust carried in the wind. Each layer was built upon by successive generations or by newcomers to the land. There are hundreds of tells and archaeological digs in the near east, the mid-east, the far east, and Asia. We can look upon old wells, ancient burial caves, and city walls. The evidence there is of the flight of days past, days that run into years and decades and centuries and millenia and eons. I stand on this ancient tell and view footprints that were made yesterday, and these immediately behind me are some which were made just now in my own size. I look at these footprints and I recall an ancient mid-east proverb. "The first wind that blows will cover your foot steps." But the footsteps are on the tell where thousands of foot steps have been, the foot steps of those many people who lived and worked and whose life histories are part of the tell.

It is interesting to know and to understand the flight of days past, and to conjecture upon, perhaps to plan for, and certainly to participate in the "Flight of Future Days." The surety of the flight of days past does give us some assurances for the flight of future days.

We have several themes for this conference:

> Spirits of '76: The Conference Theme
> Higher Education in Transformation: The Theme for the Day
> The Flight of Future Days: The Theme for this Session

These themes coordinate and they support one another. First the idea of spirit, the spirit of our forefathers and predecessors. Next there is the idea of transformation which has been the dominant feature of developing America for over three and a half centuries. Lastly there is the topic of flight. I recall some of the ideas of flight — first a picture of a balloon and its hanging basket with a passenger in the basket, and a flock of birds hitched by strings to the basket suspenders to draw the whole aircraft forward through space with their wing power. The second recollection is that at age nine when I was on my way to the Emerson School. I heard a strange noise overhead. Realizing that I knew of such things, I looked up and recognized that must be an "aeroplane" which I could see up there above my school house. It didn't occur to me then to consider if I would ever fly in an "aeroplane."

The development of aviation and particularly the aircraft for space exploration conditioned us for transformation and helped us to plan for the flight of future days. On the

morning that our space men were reported to have landed on the moon, almost all people on earth knew about it and rejoiced in their success and the accomplishment itself. To an undergraduate class discussing the joyous occasion I placed the question, "How many of you think you may fly to the moon sometime?" Almost all of them shot up their hands. They, of course, were young, enthusiastic, prepared for transformation, already accustomed to changes and looking forward to a lifetime and its provision of the flight of future days. The evening of that same day I was with a group of mature, academic supervisors and administrators and again the discussion was on moon landings. To one man about 65 years-of-age I said, "Do you think you will ever fly to the moon?" With a head rotation toward me and away with a final toss and a marked and prolonged shoulder shrug he answered, "H-mmmm, Leona, why would you ask?" Our students, those we teach, are ready for transformation. Are education leaders as ready for needed change, as are those who learn?

We have accomodated to transformation in most areas of human conduct. We have taken on unusual durable goods, we have used amazing communication forms, we have developed and used practical and luxury items, we have adopted individual and group transport devices for convenience and for pleasure, and we have developed new leisure time pursuits, recreation areas, and services. We can continue to accomodate to transformation. We must move as readily into transformation in education as we have in other activities, and we must move even more wisely.

In our colleges and universities we aim to educate, and we plan to accomplish education in two ways: One, to conserve the factual and cultural knowledge of the past which may bring pleasure or purpose into life, and two, to prepare the ones we educate to create new concepts, interpretations, and applications. We have reached the point in our history when through resolution we must accentuate some selected purposes, realize some human fulfillments and reestablish some promising directions.

At no time in history has there been such attention given to the future. Some of this is informed and academic; some is informed and emotional; and some is based upon neither information nor thought. Our modern society has engendered those who have given serious thought to the future and who may be called by the respectable title of futurist. A futurist may sometimes prognosticate what is coming and give advice on how to prepare for and meet the future as it presents its blessings and exigencies. Critically, the futurist may help to determine not only what the future may bring, but also may give direction on how to formulate the future we may wish to make. There is talk of alternative futures. Dyckman W. Vermilye, Executive Director of the American Association of Higher Education, suggests that in higher education we should put "quality before quantity, moderation before excess, better before bigger."[1]

The best futurists of the day and the futurists for the best future not only have plans but also have pursuits. The plans and pursuits assume that action should begin before the need is full blown so the full action is timed to meet the full need to care for the problems which accompany the flight of future days. Vermilye discusses the situation:

> But even though we cannot figure out the precise shape, we are getting a general picture of alternative futures, and that picture suggests some general, but urgent, courses of action. We need to know more, but the need to act now on what we already know seems far more critical. What holds us back? Perhaps the greatest obstacle is that such problems don't impress us really graphically until it is too late to deal with them. The classic illustration of a false sense of security is the example of lily of pads growing in a large pond. If a pond had a single lily pad, and the number of lily pads doubled each day, it would take quite some time for the pond to be half covered by the plants. However, at that point it would take only one day for the entire pond to be covered. If the owner of the pond wanted to keep it from being choked by the lily pads but could clear out only an eighth of the surface each day, he would have procrastinated beyond the point of controlling the problem.
>
> Some scholars of the human predicament — and not just alarmists —

[1] Vermilye, Dyckman W. Preface, *The Future in the Making: Current Issues in Higher Education*. San Francisco: Jossey Bass Publishing Co., 1973. pp. ix-xi.

believe we may soon approach that point ourselves.[2]

Vermilye would associate the example of the lily pad pond to numerous situations occurring now and yet to occur.

Dennis L. Meadows and Lewis Perelman in a chapter, "Limits to Growth," in the American Association for Higher Education publication, *The Future in the Making*, discount traditional discipline "as artificial and unrelated to real world processes," and challenge educators to premise their work upon the

> ...phases of real world problem solving: problem identification, data gathering, analysis, design of alternative solutions, choice from among competing alternatives, implementation, and assessment. Specifically we must shift the content of education to accomplish the following things.
>
> (1) Imbue our students with the recognition that the future can be deliberately created. It need not be just passively experienced. (2) Provide students with an intuitive appreciation for the causes and the consequences, the costs and the benefits of material growth and social change. (3) Provide formal, methodological tools for making useful statements about the future consequences of current actions. (4) Teach how complex systems change over time. The social sciences deal primarily with static systems at equilibrium. The important real world problems are associated with physical and social systems that are always in disequilibrium. (5) Convey the notion of uncertainty, and teach the best use of partial information. (6) Provide skills in the design of experiments to gather more information and teach techniques analyzing data in order to identify causal relationships. (7) Introduce the time dimension explicitly. Current actions have long-term consequences. Students should be trained to understand those distant results. They should be given the ethical foundation required when contemplating an action that is beneficial in the short run but whose costs must be borne by others.
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> (8) Acknowledge explicitly that man is destined to live in a finite world that will always impose some constraints on the range of options. The image of a future utopia must be replaced with a vision of a limited world filled with difficult trade-offs. Students should learn to make choices which inevitably involve compromise. (9) Describe the behavior of real world organizations. Without a realistic understanding of the motivations and the leverage points in industrial and political bureaucracies, our students will inescapably be frustrated at their inability to bring desirable changes in the organizations that govern so much of modern life. (10) Teach the concept that goals adapt slowly over time in response to new information.
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> In short we must decrease the emphasis on teaching facts and theories, most of which will be incorrect or irrelevant within a few years. Instead we should change the content of higher education so that it provides our students with skills necessary to identify their own theories and to assess the accuracy and the relevance of those theories in a milieu of constantly expanding knowledge and changing goals.[3]

The authors consider that the goals are necessary but question that education in its processes can meet all of the goals. As an educator and a physical educator, I would find it difficult to talk all of these conditions into existence, but as a physical educator and an educator, I am willing to attempt to conceptualize and actualize these goals through the planned inclusions, emphases, and experiences in a rich and well conceived and directed program of activities. Perhaps we could not measure quantitatively all of the results, but undoubtedly we could recognize their emergence and be aware of the progress in their development. And if we accomplish any recognizable progress toward these goals, then that is a measure of success in a very large venture.

Sixteen months ago when alerted to this assignment, I began to watch closely for the expression of needs and the beginnings of significant trends in higher education. I made lists of ideas and key words; I made consolidations with the initial letter "M" — for Monterey Peninsula. There are ten for time manageability and for topic control. The ten topics fall into

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[2]Ibid.

[3]Ibid., pp. 111-127.

three main classifications:

1. What will we do with or for the students?
2. What will we do for society?
3. What will we do within our institutions?

We are not only going to live in the future, but we are going to help determine how that future will be, not merely in our own lifetimes but in the lifetimes of our students and in the flight of future days — perhaps forever, so:

1. What will we do with or for the students?

Meaning

— We will develop our own full meanings and make them clear.
— We will give emphasis to meaning and we will help students to develop their own meanings.

One hundred years ago we celebrated the Centennial of the United States of America. In 1876 the famous English biologist, Thomas Henry Huxley, came to our country to deliver a series of lectures and to present the inaugural address of a new university, Johns Hopkins, in Baltimore. To us he stated that he was not "in the slightest degree impressed by your bigness, or your material resources, as such...size is not greatness and history does not make a nation. The great issue...is what are you going to do with all these things?"

One hundred years later, in the time of our Bicentennial, we can ask the question again, in various forms, in many institutions, and of one another — "What are you going to do with all these things?" We must continue to seek and to find the answer that satisfies the mind, compels the heart, and directs the human. What are we going to do with all these things? What are we going to do with our research, how shall we direct our teaching, and how shall we use our facilities?

In 1976 Johns Hopkins celebrated its centennial. The question was not asked again, "What are you going to do with all these things?" but the alumni, the students, and the faculty have made declarations that life is for the living and that education is for the living. That idea may be new, but it is also old. The ideas underlying the provision of opportunities for the fullness of life are written into the papers upon which our nation was founded.

A writer who recently made the best seller list with his *Zen and the Art of Motorcycle Maintenance* develops a long and interesting account and interpretation of the experiences of riding. He writes an introduction:

> The study of the art of motorcycle maintenance is really a miniature study of the art of rationality itself. Working on a motorcycle, working well, caring, is to become part of a process, to achieve an inner peace of mind. The motorcycle is primarily a mental phenomenon.[4]

Pirsig writes about maintenance, about riding, about observations and reflections and mental associations. Pirsig lives in the world of both reality and meaning as he pursues his commitment to this activity as a recreation and an expression for living in its breadth and depth.

You may like some of the lines from the 406 pages; perhaps you can apply them to an interpretation and appreciation of some of the chosen activities in which you participate or in which you direct other. Pirsig writes:

> ...you're *in* the scene, not just watching it and storms are definitely part of it. (p. 20)

> I think we should notice it, explore it a little, to see if in that strange separation of what man is from what man does we may have some clues as to what...has gone wrong in this twentieth century. (p. 27)

> Sometimes it's a little better to travel than to arrive. (p. 111)

> A real understanding of quality captures the system, tames it, and puts it to work for one's own personal use, while leaving one completely free to fulfill his inner destiny. (p. 217)

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[4]Pirsig, Robert M. *Zen and the Art of Motorcycle Maintenance*. New York: Bantam Books, 1947

> The more general a fact, the more precise it is. Those which serve many times are better than those which have little chance of coming up again. (p. 258)
>
> We keep passing unseen through little moments of other people's lives. (p. 202)
>
> (Of a wall) It was beautiful because the people who worked on it had a way of looking at things that made them do it right unselfconsciously. (p. 204)
>
> When one isn't dominated by feelings of separateness from what he's working on, then one can be said to "care" about what he's doing. (p. 290)
>
> The real cycle you're working on is a cycle called yourself. (p. 319)
>
> A person who knows how to fix motorcycles — with Quality — is less likely to run short of friends than one who doesn't. (p. 351)

Motorcycle riding is a skill, a physical skill, and one of knowledge, judgment, applications and appreciations in the manner that Professor Pirsig travels, observes maintenance and makes meaning.

The book is a beautiful example of full and related concepts of consciousness in the pursuit of an activity which has significance in the present and which promises rewards in the flight of future days.

Many excellent reviews have been written about Pirsig's description of his life of activity such as:

> A sort of book of life; a book about feeling and caring about what we are and the quality of our lives. It offers glimpses of what living really means...Besides being a man of tremendous intelligence, Pirsig is a fine writer.
>
> *– San Francisco Examiner and Chronicle*

> A journey toward awareness and appreciation of the world and of one's special place in it.
>
> *– Cleveland Plain Dealer*

Pirsig can show you an enjoyment of life and activity.

Mode

- — We will demonstrate clearly some good personal and some contributive social and professional conduct.
- — We will program for and acknowledge conduct and choices which may individualize and improve students.
- — We will expect that educated conduct will make an improved society and we will work through those means toward that end.
- — We will stop being so conditional and non-judgmental.

Mode, thus, represents mode of living, the expression of life's values, the ways of being, the choices for continuity or discontinuity in action, and the contribution and responsibility to others.

In a book described as fiction, which it is, with a nonconsolidated plot, the lead chapter, to page fifty-nine, is entitled, "The Loneliness of the Long Distance Runner." That is the name of the book, too. It starts, "As soon as I got to Borstal they made me a long-distance cross country runner." Borstal is one of a number of British prison associated reformatories for young offenders age 16 to 21. The seventeen-year-old of the story has interpretations and explanations about running which are not expressions of our profound philosophies. He spends hours, days, minutes running. He thinks to himself, he talks to himself; he talks to others. The chapter describes the sport of running as it may be viewed by some Borstal boys or some other non-college men. It is not humanized or idealized as you and I would have physical education or sport be. The runner describes a practice:

> By the time I'm half-way through my morning course, when after a frost-

bitten dawn I can see a phlegmy bit of sunlight hanging from the bare twigs of beech and sycamore, and when I've measured my half-way mark by the short-cut scrimmage down the steep bush-covered bank and into the sunken lane, when still there's not a soul in sight and not a sound except the neighing of a piebald foal in a cottage stable that I can't see, I get to thinking the deepest and daftest of all. The governor (the director of the center) would have a fit if he could see me sliding down the bank because I could break my neck or ankle, but I can't not do it because it's the only risk I take and the only excitement I ever get, flying flat-out...scratching myself to bits and almost letting myself go but not quite. It's the most wonderful minute because there's not one thought or word or picture of anything in my head while I'm going down. I'm empty, as empty as I was before I was born, and I don't let myself go, I suppose, because whatever it is that's farthest down inside me don't want me to die or hurt myself bad. And it's daft to think deep, you know, because it gets you nowhere, though deep is what I am when I've passed this half-way mark because the long-distance run of an early morning makes me think that every run like this is a life — a little life, I know — but a life as full of misery and happiness and things happening as you can ever get really around yourself — and I remember that after a lot of these runs I thought that it didn't need much know-how to tell how a life was going to end once it had got well started... I was whizzing down the bank and not seeing a bloody thing.[5]

The Borstal long distance runner details a long distance cross-country race of five miles and his thoughts of the possible success by winning and the favors he would have in the remaining few months of his detention. He considers escape and flight; he appraises himself and his situation as he is in the lead toward the end of the race:

I know now there isn't another long distance cross country...runner in England to touch my speed and style...Our doddering...governor... is hollow like an empty petrol drum, and he wants me and my running life to give him glory, to put in him blood and throbbing veins he haver had, wants his potbellied pals to be his witnesses as I gasp and stagger up to his winning post so he can say, "My Borstal gets that cup," and his pals will think he trains his lads to live right, after all; he deserves a medal but we'll get him made a "Sir"...they've seen me...and loud-speakers are spreading out the news that I'm well in the lead...I didn't want to give anybody that much of a show, or win the race by accident...I'm slowing down for Gunthorpe to catch me up...where they can see what I'm doing, especially the governor and his gang...and I'm going so slow I'm almost marking time.

Gunthorpe passed and hit the finish rope first. The Borstal boy had his understandable reasons to support his losing the race for himself as well as not winning it for the governor. He spent the next six months "carting dustbins," spreading out slops and scrubbing floors.[6] Borstal boy says:

It was worth it when I look back on it, considering all the thinking I did...and the boys...never had enough good words to say about me.[6]

Can we in education; in physical education, consider that a person should have some of his own choices on his own way of being, on how he shall use his performance ability? The artist can choose how a depiction shall be made; the one who is quick or able with words can determine how the ideas will be put together and stated — all within the limits of ability — all determined by choice — and perhaps directed by propriety.

Mentality

— We will teach the facts and skills of the culture and times and attempt to prepare the student with a practical command of the supporting and sustaining knowledge of significance and of relation to current and future interests and concerns.

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[5] Sillitoe, Alan. *The Loneliness of the Long Distance Runner*. New York: Alfred A. Knopf, 1968. pp. 18–20.

[6] Ibid., pp. 40–54.

— We will educate the student for judgment and response to situations, manifesting individual ability, personality, and responsibility.

The world of living, the world of human action is a learning, thinking, responding, evaluating world. In responding fully and responsibly the learner is living fully and humanly. It is mentality, intellect, responsibility which identify or characterize the human uniquely in contrast to all other of earth's species or beings.

A depictive and interpretive explanation about the mentality of action is given by Timothy Gallwey, a tennis player, in his book, *The Inner Game of Tennis*:

> Every game is composed of two parts, an outer game and an inner game. The outer game is played against an external opponent to overcome external obstacles and to reach an external goal.
>
> It is the thesis of this book that neither mastery nor satisfaction can be found in the playing of any game without giving some attention to the relatively neglected skills of the inner game. This is the game that takes place in the mind of the player, and it is played against such obstacles as lapses in concentration, nervousness, self-doubt and self-condemnation. In short, it is played to overcome all habits of mind which inhibit excellence in performance... Victories in the inner game may provide no additions to the trophy case, but they bring valuable rewards which are permanent and which contribute significantly to one's success thereafter, off the court as well as on.
>
> The player of the inner game comes to value the art of relaxed concentration above all other skills; he discovers a true basis for self-confidence; and he learns that the secret to winning any game lies in not trying too hard. He aims at the kind of spontaneous performance which occurs only when the mind is calm and seems at one with the body, which finds its own surprising ways to surpass its own limits again and again... The player of the inner game uncovers a will to win which unlocks all his energy and which is never discouraged by losing.

Gallwey deals in his own way with sport psychology and with motor learning. The philosophy and the interpretations which challenge mentality are developed throughout the book which is a description of the teaching process and the learner's full response.

You may not agree with all Gallwey writes, but you will respect him as a tennis player, a participant in the national Junior Championships, a student at Harvard and captain of the tennis team, a college administrator, and now a tennis pro at the John Gardiner tennis Ranch at Esalen Sports Center in California. He has thought and he has written, and what he has written in the concluding chapters apply to mentality: the Inner Game Off The Court, Unfreakability, The Art of Quieting the Mind, Letting It Happen, Concentration and Higher Consciousness, The Goal of the Inner Game, and The Discovery of Self.

You don't have to take Gallwey for gospel truth, nor need you think "Zen." Perhaps Gallwey and Zen have some unique ways of helping us get at or understand the ways of mentality and action.

Market

— We will work for marketable and contributive knowledge and skill.
— We will educate for the knowledge and appreciations which will give value and quality to life.

Shall we prepare our students through education and "salable skills" with which to make a living? That is one outcome of education and may be one of the prime objectives. Preparation for the world of work is not challenged as much now as it was twenty-five or thirty years ago. T.H. Bell, U.S. Commissioner of Education, has said,

> To send young men and women into today's world armed only with Aristotle, Freud, and Hemingway is like sending a lamb into a lion's den.

The students themselves sometimes value knowledge for its own sake, often evaluating their education for its promise of income, but most frequently stating their life aims to be attained through education. Their aspirations for what they may become, and how they can live, in what ways they may serve, call upon all educators, who out of their own fullness and

wholeness must teach for the fullness and wholeness of others in answer to that call. Idealism is worthy, but it will not be sustained for long at a high level without an employment base. There are few who will deny that one objective of post-secondary education is to make the graduate solvent through marketable skills that he may become by his labor, by his service, and by some portion of his funds a contributor to organized society.

Education that is for living in an economic way, a contributing way, and a personally sustaining way puts a value upon education. Work contracts have a cash value. The satisfactions gained and the human value of service and appreciation are not marketable, but enrich and enhance living. It is difficult to put a market value upon a rich and rewarding life, but that life is the end and purpose for which there is education and labor.

2. What will we do for society?

Mankind

— We will strive to make education individualized yet fully expressional, humanized, and of social consequence.

Education should be for the well-being of each member of the society and for all mankind. Such an education needs to help human beings to become self-caring and contributive and needs to help all world inhabitants to become more responsible for themselves, their families, their fellow countrymen, other nationals, and for the earth and its condition.

In the opening address of the 30th National Conference on Higher Education, March 1975, Jacqueline Grennan Wexler, President of Hunter College, stated:

> Success and quality must be distributive if the family of man is to be a family of dignity. Those committed to the life of the mind cannot afford to support the hierarchical cult which respects only the intellect of the few. If we are to create a world of distributive justice, we must achieve distributive rather than hierarchical quality.

Dr. Wexler expressed concern for educating not only the whole people but the whole person.

Mature Living

— We will provide educational opportunity for life-long learning.

The plan for the future includes educational links and continuity for those who are out of school. Courses and educational enterprises will be conducted in and out of school by school systems, colleges, and universities. Some of the offerings now are and will continue to be extended through libraries, nursing homes, prisons, hospitals, clubs, and recreation departments. Many of the courses are relatively light in demands and short in term, yet serious study may be undertaken successfully in philosophy, languages, civic responsibility, and in many other areas.

Minority Education

— We will provide education to attract and serve minorities.
— We will provide education which will both conserve minority customs and acculturate minorities into the national modes of education, labor, and culture.

There are many problems to be understood and resolved on opportunity, support, retention, and bilingual education. In our study of these problems, in our judgment and in our wisdom applied to future action may lie a large measure of the success of America as a strong and continuing democracy.

3. What will we do within our institutions?

Means and Management

— The problems which call for solutions are in matters that pertain to money and governance.

New ways are evolving and others are being developed by the pursuit of such techniques as systems analysis, management by objectives, program evaluation review techniques, and fault free analysis.

Methodology and Media

— Continued attention will be given to research and to its application.

Experimental methods will be employed. Some will be as simple as tested premises which will work with one teacher or administrator in one situation, perhaps only one time. Other methods will be pursued through scientific method for resultant findings.

Institutional and instructional methods have been given study by faculty and administration. Ways will be improved for getting the work done. Computers, copy machines, microfiche type methods, and storage and retrieval will help both the teaching and the managing in institutions.

Did you ever note that at one of our meetings several of our fellow professionals from different schools reported on a new institutional practice? Well, administrators, purchasing agents, registrars, superintendents of buildings and grounds, all have their working conferences, too. When word of a new process in administrative theory gets out, it gets promulgated. It is good to have supportive practices generated in other areas of academica. Those policies and practices which we consider may curtail our endeavors get passed around, too!

Measurement

— Forms of measurement will continue to be used in evaluating the accomplishment of students, teachers, departments, colleges, teaching materials, and institutional services.

The words and phrases which may have some special interest to us which have a line of action leading to the future are accountability, management by objectives, and competency-based teacher education.

Measurement in education is most frequently made on student progress and development. Teachers are often measured by students and administrators.

Teaching excellence usually concerns the teachers themselves, the students, and the administration. Many evaluation forms have been developed. A. Bruce Hartung of Gaston College describes the qualities of faculty members as teachers to include a basic kindness toward the student, knowledge of subject, use of clear and understandable statements in discussion and lecture, and imagination and resourcefulness to give varied explanations and devise ways of stimulating students. Teachers must also give evidence of desirable characteristics as scholars, as counselors, as faculty members, as citizens, and as persons. Hartung conducted a study which discloses that the fifteen characteristics with the highest supportive ratings are:

1. Have adequate knowledge of the subject taught.
2. Give evidence of emotional stability.
3. Make subject matter interesting.
4. Make explanations which are clear to all students.
5. Plan and prepare coursework carefully in the light of overall course objectives.
6. Give evidence of open-mindedness.
7. Give individual help to students when they need it.
8. Display an understanding attitude toward students as persons.
9. Make students feel free to ask questions in their classes.
10. Stimulate intellectual curiosity.
11. Enjoy working with students.
12. Manifest skill in the methods of instruction most appropriate for the subject.
13. Show tolerance of other people's views.
14. Display loyalty to the institution in which they teach.
15. Reflect high personal standards in their behavior.

In the archeaological digs the discovery is often made that basic materials, cut stones, built-up walls, or aqueducts from one structure or habitation grouping are used in the next building development. From an abandoned building group or from an earthquake destroyed temple, salvagers take pillars, floor mosaics, pieces of walls, and other structural elements

and recombine these with the necessary new pieces to build according to their own needs and times. Most often the old materials used in a new way lose their former identity and take on or add to the character of the newly structured development. Sometimes the old pieces are incorporated into a new development and fluted columns from an older structure will be used in an on-site replacement, or they may be carried away hundreds of miles to a new location. Occasionally ornate or decorative or fundamental pieces of one structure will be used in an entirely different manner, an almost irreverent manner in another structure. Carved stone capitals which once were mounted above columns appear as ordinary stones in walls at Byblos in Lebanon and Corinth in Greece. Fluted columns which once stood vertical in elaborate ceremonial buildings are now used on the horizontal as structural ties to hold coarse stone walls together in later buildings which still stand at Caesaria, Byblos, and Corinth. Some of these structural materials were salvagings for later purposes. Some were piratings by military leaders and rulers who would destroy an architectural wonder to gain materials to build a monumental structure to honor themselves.

In the past we have had those who preserved, those who restored, those who salvaged, and those who have plundered. We have had those who have come with old plans and used new materials. There are those who have come with new plans and used old materials. Some have come with new plans for new materials. Most of the lasting good in the world has been accomplished by those with knowledge, plans, ideals, work, and with nobility in their souls.

"The tasks of social change are for the tough-minded and competent. Those who come to the task with the currently fashionable mixture of passion and incompetence only add to the confusion." So says John W. Gardner.

America has always meant opportunity. America still means opportunity. Our future lies in our wise use and stewardship of earth resources by an educated body of citizens in the development of fully responsible and fully human goals. These goals must be compatible with a series of wise choices and actions which will lead us to individual expression and group attainment.

We will look to the future not only for our fellow citizens but for all humanity. We must develop a knowledge, a faith, and an action which will lead us in our days, in our land, and in all lands in the days that extend beyond our own time and on into the everlasting days in an ever-extending universe. We have the promise of the flight of future days; their fulfillment is up to us.

NEVER ENDING FLIGHT FOR FUTURE DAYS

Maxwell L. Howell
Dean of Professional Studies
San Diego State University
San Diego, California

It is a very great honor to be asked to talk at the National Association for Physical Education of College Women.

First, a few confessions. These few remarks were written in collaboration with my wife, Reet, who has her doctorate degree in physical education. This is certainly an indication that

members of the National Association for Physical Education of College Women and the men's association can really work together in harmony, and indeed may indicate, as is the theme of this presentation, a flight for future days. I don't know whether I'm suggesting increased inter-marriage between the two associations, or some complicated computer dating set-up, but this meeting certainly is historic and suggestive of the closer liaison, possibly merger, in the future, of the two outstanding associations. In any case, if there are errors in this presentation, or aspects you disagree with, I will confess these are my wife's contributions — that you may agree with I modestly admit is my own original touch.

But one other confession. It really is a trepidation, a fear. It has to do with sharing the podium with Dr. Leona Holbrook, who I have been an open admirer of for so many years. She beat me to the top of the Masada in Israel a few years back as I had to pause for a rest, I have seen her representing the United States in other countries, being given honours at AAHPER, adding dignity and knowledge to the American Academy of Physical Education, giving research papers and chairing programs at the North American Society for Sport History, reading of her contributions at Olympic, Greece, at the International Olympic Academy, but if that isn't enough, knowing that she wacks out a pretty lively song at the Western Society — and hearing that she speeds around Utah on a motorcycle. It's simply not fair. I feel like a mouse trying to out-hop a kangaroo, or a koala bear trying to fly a Quantas plane. Seriously, it is a pleasure to share the podium with one of the great people in physical education, Dr. Leona Holbrook.

But to the topic, "Never Ending Flight for Future Days." John Keats said, in the poem *Fancy*:

> Ever let the fancy roam
> Pleasure never is at home.
>
> Then let winged Fancy wander
> Through the thought still spread beyond her:
> Open wide the mind's cage-door
> She'll dart forth, and cloudward soar.
> O sweet Fancy! let her loose;

So my fancy indeed will briefly roam, dart forth, and cloudward soar. With apologies to Shakespeare and a few other poets who have made modest contributions throughout the eons, a relative unknown offers a few remarks.

Our Flight to Future Days

(With apologies to real poets throughout the world)

Jimmy the Greek is a wise old fellow
But as he ages and becomes more mellow,
He knows the odds are but fifty-fifty
And even then he'd be pretty nifty
In guessing our flight in future days.

Will the world, indeed, all be running,
Or forget it and go on sunning,
Will Mao's plan be done by all
Or the kids go on and have a ball
In future days?

Yes, Jimmy the Greek is a wise old fellow
But as he ages and becomes more mellow
He thinks the kids will do their own thing
And that's the song that all may sing
In future days.

Whatever the case, we can but guess
And hope it's not one bloody big mess

As we all give a rub to the crystal ball
And try to predict what will happen to all
In future days.

From a Dean's perspective, what is going on in higher education that will influence our flight in future days? The Dean, like the faculty member, is so busy concentrating on survival it is difficult trying to look beyond a particular problem. It is tough to plan, to think ahead, when you feel you are swimming against the current and the waves keep dumping you.

So much has happened in the universities in such a short space of time. The future in the universities, in my opinion, is linked to those developments that we see at the present, and they are crowding us, harassing us daily. These main developments are:

First, increased accountability. The faculty member, the Dean, the Vice-President are all more accountable than ever before. The mid-west model is slowly being utilized throughout the land, and increasingly so. Not too many years ago at most institutions tenure was virtually automatic. If you kept your nose clean and didn't do too much so you wouldn't offend anyone (the art of being successfully mediocre I would call it in my rare cynical moments), if you had coffee and cocktails with the right people, tenure was forthcoming. Now we hear the words teaching effectiveness, professional growth, service to the university and community. And teaching effectiveness now is no longer ascertained by word-of-mouth, but by questionnaires in which student opinion is elicited, and peer evaluations are sought. And professional growth demands are much more stringent, embracing not merely professional activities, but papers and articles, and we hear the subject of refereed journals as never before. The university will, indeed, become tighter, and the expectations of the university with respect to physical education faculty will not differ essentially to the expectations of other faculty. The "we are different" philosophy no longer has credence. Many of us have had a pretty soft ride — the honeymoon is over in the university, and each person on the faculty, now and in the future, will find himself and herself more accountable, and having to demonstrate balance in the holy trinity, teaching effectiveness, professional growth and service to the university and community. The flight in future days for the faculty will be interrupted by many air currents and a few rough landings unless this message is understood. Fortunately, the products of the top universities realize that the mid-west model is more and more being realized, and a tough, aggressive, competent, professional young person comes to us ready for the journey into the future.

Second, we see increased bureaucracy and decreased humanism. My theory was that San Diego was slowly going underwater by the deluge of paper coming to us, but my more recent scientific calculations have established with confidence, at the .001 level, that there is no danger. The paper arriving at San Diego balances that in New York and other cities, and the country has more stability than ever in its history. If anything happens, the whole country will go down at once, but you can save yourself from drowning by grabbing at a doctoral questionnaire that some student has sent you as it floats by. But the increase in the bureaucracy is inevitable in our journey into the future, and with it is the fact that we more and more lose contact with people. Deans are being spoken of as managers as we move towards collective bargaining, and this will offend such as myself, who see themselves as faculty who in a moment of insanity felt that they could help the common good. The difficulty, as we get bigger and more bureaucratic, and accountability is insisted on more and more, is that we forget about people, about each person, each member of the faculty and each student. And it is essential that we all work together to make the university a human and warm place, as it should be and can be with proper leadership and professional attitudes. Idealistic, why not? But it all has to do with proper leadership and professional attitudes.

Third, we see a steady-state situation emerging in universities and indeed departments. The major universities in the land will increasingly hold the line at a certain peak of growth, and will limit enrollment so that the growth will not be exceeded. A certain university will decide to hold the line at 20,000 or 25,000 or 30,000, as the number of faculty, the funding, and the facilities have stabilized. Hence, the intake has to stabilize, to maintain a steady state. The era of unqualified growth is at an end in many universities. The flight toward future fancy would appear to be one that emphasizes quality rather than quantity — better students, better selection processes, more rigorous standards. This is the battle-ground in the future. The future is quality, not quantity. We have been bemused by numbers, and our standard of education has lessened.

Fourth, this demand for quality will extend to physical education departments. Each unit in the university will increasingly be challenged to define its long-term and short-term goals, its place in the university, the purpose of its curriculum. No area will be secure — its place in the total educational system will be continually questioned and evaluated. Past models will disappear as each unit argues its case for a scarce and shrinking dollar. Academic reviews, rigorous academic reviews, will subject the faculty and curriculum to increasing analysis. Past history and prior rights will no longer be relevant — if it is a physics program or a physical education program, physical education will want to have its house in order. So quality will be the order of the day in physical education in the future. And each of us will have to answer the question — are our standards high enough, is our teaching of sufficient standard, are our courses well prepared, searching, comparable to other units of the campus?

Which brings me to a harsh point, and one that may not be readily accepted, and that is the general inflexibility of physical education and its offerings. What imagination has physical education displayed? Is the sole aim to prepare teachers for secondary high schools?

What about a degree for coaches, as in the USSR, a specialization for sports masters, or a specialization in rehabilitation or sports medicine or athletic training? Physical education and physical educators should be in the market place, but this Dean sees heads in the sand, or planes in the clouds of yester-year, rather than space ships looking for new planets.

How responsive has physical education been to societal changes, such as existentialism? As Vanderzwaag said (1):

> Perhaps the most outstanding feature of existentialism is the acute interest in the individual. The existentialist begins with the assumption that man, the individual human being, is at the center. Everything else in this world should be subordinate to and evaluated in terms of the "human condition."

As Walt Whitman put it, "One's-self I sing, a simple separate person."

The existentialist viewpoint has resulted in significant shifts in thinking and society has felt its effects — youth doing its own thing, the revolt against societal values, the revolt against parents, the home, police, new attitudes toward sexuality — we all have been caught up in the swirl of the existentialist's viewpoint. Sport and physical education, which change with the society, have been similarly influenced. And though this philosophy will not remain with us to eternity, its influence will be felt for many years to come. There appeared violent books decrying the dehumanizing aspects of sport. Whatever you may think of them, books like the following have caused significant changes in thinking about sport — the brutal and animalistic descriptions of Vince Lombardi given by Jerry Kramer in *Instant Replay*; the discomfiting disclosures of the exploitation of the black athlete described by Harry Edwards in *The Revolt of the Black Athlete*; the disquieting description of the turmoil of American athletics caused by various counter-cultures described by Jack Scott in *The Athletic Revolution*; Dave Meggyesy's *Out of Their League*, in which various dehumanizing aspects of football were dramatically brought to the fore — fraud, payoffs, racism, drug abuse and violence; Bernie Parrish's *They Call it a Game*, which indicted the professional football establishment for its greed; Paul Hoch's *Rip Off the Big Game*, a savage Marxist book decrying the exploitation of sport by the power elite; Jim Bouton's controversial *Ball Four*, which aimed at the sacred cows of sport and reduced sporting heroes to mere mortals with understandable human foibles; Leonard Shecter's *The Jocks*, that lashed into the hypocrisies of sport, of greed, of corruption, of exploitation of the athlete; and the brilliant, pathetic book by Lance Rentzel, *When All the Laughter Turned to Sorrow* — in this masterpiece we see the athlete as an individual in an alarming manner.

These authors would not consider themselves existentialists — some were merely trying to exploit a good thing and make money — and besides a few could not even spell the word — but they were concerned unknowingly in most instances with existentialism. They were concerned that sport could be brutal and dehumanizing, and were influential in making the public realize that too often the individual was being submerged and dominated by tradition, by the so - called American ethic. Through the battle, though it has been unpopular with traditionalists, the athlete has emerged as more of an individual — issues such as length of hair, athletes' rights, and so on, are no longer the concerns they were a few years ago.

Other changes have occurred in calm, with little fanfare. The counter-culture has caused

sports which deal with the individual to emerge, and, indeed, there has been a social revolution, influenced by existentialist viewpoints — we see bicycling, back-packing, jogging, skiing, sky-flying, surfing — as individuals press to do their own thing, unencumbered by the need to do those sports that society expects them to do. These occurrences effect the physical education program, as children no longer wish to pursue continually many of the traditional team sports like football and basketball. The whole field must necessarily respond to these shifts in thinking, but has been slow to heel because of the inflexibility of many of its members.

Physical education is and should be a humanistic aspect of the curriculum. This need for the humane focus in our field rests on the individual and his capacities for actualization. Thus, the need is for self-integration and self-development, as the schools should be more humanistic. In a book *The Me Nobody Knows: Children's Voices From the Ghetto*, a ghetto child of 13 said: "When I first get up in the morning I feel fresh and it seems like it would be a good day to me. But after I get in school, things change and they seem to turn into problems for me and by the end of the day I don't even feel like I'm young. I feel tired."

Fifth, legal changes will occasion significant shifts that could not be accomplished beforehand by logic and reason. Title IX is a significant document that will occasion fantastic social change. On the heels of the women's liberation movement, perhaps influenced by it, came the Title IX legislation, and a shock-wave was felt in the golden kingdom called men's athletics. A new world is opened for women athletes, coaches, trainers, publicity directors. The future is easy to predict in sport — a new woman will emerge, athletic, competitive, proud, well coached — it will be an exciting, exhausting period, and it is only to be hoped that the women will not be so foolish to repeat the errors of the men.

Sixth, an undeniable fact to us in our comparative and historical studies, in particular, is that American college and high school sport have reached the peak of their development and are on the decline. They have led the world in their extravagances, and their productivity, but under their present form they are fighting a losing, rear-guard action. With student and community dissatisfaction with the financing, with the philosophy, with the increased costs, with the increased commitment to women's sport, with the increased professionalism of college sports, it would appear to be inevitable that there will be, increasingly, a move to de-emphasize. Sports and games, indeed, rise and fall, a generalization in sport history.

Football, basketball and baseball are products of American society, that have changed as American society has changed, and it is with regret that it must be stated that as these sports are conceived today in the schools, particularly football, they are becoming increasingly difficult to justify. The words must be stressed "as they are conceived today," for not too many years ago they were not so commercialized. The speakers today are not advocates of intramurals only, and believe that competitive sport supplies a need for certain youth, male and female.

There is a need, moreover, for a new philosophy of sport. The "winning is everything" philosophy is in drastic need of revision and is contrary to the wishes of a majority of the counter-culture, particularly the young. How pathetic it is to approach a player after a losing game, when the individual has played well, and congratulate him on his game. He hangs his head, he apologizes, he tells the coach he is sorry he let him down. At last count, one team only can win each game, and it is possible to play well and lose. Sport is and should be as competitive as can be, but sport is personal — it is how well you play. Your own personal accomplishments are the important thing. The Mao philosophy is not so foolish — friendship first, competition second. Sport *can* develop sportsmanship and character, it does not necessarily do so. The aim of the physical educator and the coach should be to use competitive sport to assist the development of such qualities. Sport should bring people together, should increase friendships, should aid the individual in the understanding of self, should not be a divisive activity. We are way off base in our approach, and we can do the United States a tremendous service by reviewing our philosophical approach. There needs to be a revision of the commonly held concept that the need to win is *the* American approach. There are simply too many losers in America, and it is for this reason that there is a social revolution going on with men and women camping, hiking, back-packing, skiing, surfing, bicycling — they are doing their own thing. The winning that occurs is a personal thing. The personal challenge is where it's at.

So, indeed, we have let our fancy roam in our flight in future days. It is to be hoped that

the view is not too cynical. It should not be. The message is that nothing can be taken for granted in tomorrow's university. There will be increased accountability, increased bureaucracy and decreased humanism, a societal need for more humanistic approaches, but a steady state situation that will occasion a need for stressing quality above quantity, a need to re-examine curricula in the light of the changing needs of society, and fantastic changes that will occur as a result of Title IX, which will open up a new world for women, and require the men to re-examine their past extravagances. The flight into future days will be rocky, will occasion a little air-sickness, but in all frankness can, with proper leadership, develop sport and physical education programs more relevant for society.

Ah, Jimmy the Greek is a wise old fellow,
But as he ages and becomes more mellow
He knows the odds are but fifty-fifty
And even then he'd be pretty nifty
In guessing our flight in future days.

Questionnaires we'll all have to show,
The bureaucracy will keep it all slow,
But the main thing we all have to see
Is that people ever will wish to be free
In future climes.

The cry will be to do one's own thing
And indeed, of one's self to sing,
And Title IX will shock the troops,
And women will be training in groups,
In future times.

But above all we should not despair
Though at times we'll feel we're chasing a hare,
For quality is what we all will seek
And we'll be proud of our field, as we take peek
In future days . . .

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Accumulation and Application of Knowledge

DEBUNKING THE MYTHS

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Twenty years ago the state of knowledge about the female athlete was concisely summarized by the author of an exercise physiology text as follows, "In general, the endurance performance of the best woman is comparable to that of the poorer male athlete...at puberty, development of ability for strenuous exercise stops or even declines in girls while it continues to advance in boys." Under the impetus of this type of encouragement, it should surprise no one that a paper on "World Standards of Cardiorespiratory Performance" published in 1966 presented two tables for males, one for average men and one for male athletes, but only one table for females...for "average" women. Just *ten* years ago so little was known about female athletes that it was impossible to include them in a study of cardiorespiratory performance. Is it any wonder that distance races for women were limited to 880 yards, that full-court basketball was considered too demanding for girls, or that weight training and females weren't mentioned in the same breath? Well, what have we accomplished since then? How much knowledge have we accumulated about the female athlete and how has it been applied?

For one thing, a number of popular misconceptions have been debunked...most notably the idea that women are not physiologically suited for endurance events. These days females of all ages, from under 10 to over 50, are running the ultimate test of cardiovascular fitness, the marathon. By measuring the aerobic power of these women we have learned two things, that the endurance capacity of some women is *better* than many *good* male athletes and that women long past the age of puberty can continue to develop their ability for strenuous exercise. This does not mean that all women are taking advantage of their capability; the average woman is still just that—average. But the potential is there if women can be encouraged to take advantage of it. One of the first encouraging signs that more women are changing their life styles to include more activity is the result of a recent cross-sectional study of a representative sample of Santa Barbara women. If any of you remember being told that fitness levels of American women were far inferior to those of the average Swedish housewife, you'll be pleased to know we have caught up. The results of this study show the average values across all age groups are almost identical for both groups of females. Even

more encouraging was the finding that active women in their 30's and 40's—and female athletes do come in all ages—were able to maintain fitness levels comparable to the active 20 year old. Confirmations of this optimistic report comes from a longitudinal study in San Diego, where Kasch and Wallace report that men, ages 32-56, who participated in a training program for 10 years showed no decline in aerobic power, our best objective indicator of cardiovascular fitness.

A second misconception which has been laid to rest is the fear that weight training will "masculinize" the female body. Such fears are not eased by occasions such as this conversation between two commentators during the half-time period of one of the first televised women's basketball games: Commentator #1: "Some of those girls do weight training but don't worry. We're assured they'll keep their curves." Commentator #2: "Ah...do they remain date-oriented like other college girls?" It is gratifying to report that there is no evidence that weight training changes the sexual orientation of young women — nor does it result in gross changes in muscle bulk. After a 6 month training period, Wilmore reported a large improvement in strength,approximately 30%, but a small increase in muscle girth, less than 3% for a group of young female track and field athletes. Years of training may well result in some muscular hypertrophy, but if a female athlete does have bulky well-defined muscles it is more likely because she has higher than average levels of endogenous testosterone. As with many other physiological variables, the level of the sex hormones follows the well known normal distribution. To ridicule a woman for having a well defined musculature makes as little sense as most other forms of prejudice.

Another recent discovery in this same area — the effect of sex hormones on body composition — is related to the effect the female hormone,estrogen, has on the addition and disposition of adipose tissue on the female frame. After puberty the average female has approximately twice the percentage of body fat as the male, and in sports where she must carry her body weight as part of her work load, this can be a detriment to her performance. However, now that women are training and competing in endurance events such as the marathon, we are finding that they can reduce their percent body fat to the low levels found in male distance runners. It is still too soon to tell what long-term effect, if any, might result from such a deviation from the norm. There are disquieting reports that some of these women with extremely low values for % body fat have missed menstrual periods for as long as 9-12 months — but the abnormal cycle may also be related to the stress of running 100 or more miles per week. This is certainly an area which needs further investigation before one would feel comfortable encouraging a woman to decrease her % body fat below 12-15%.

The entire relationship between the menstrual cycle and athletics is a murky one. Much has been written about it but very little "hard" data is available to support any position. Part of the problem, I believe, is that we have failed to look at the female athlete as a woman first and an athlete second. In any group of women there will be a few completely incapacitated by severe dysmenorrhea, those who have some discomfort but manage to maintain their usual activity patterns, and those who have no discomfort at all. The same pattern is found among women athletes, — although menstrual cramps are slightly less common among active women. As of now there is no evidence that sports participation has any significant effect on the menstrual cycle. The reverse question — the effect of the cycle on performance — is also a hazy area. Based on self-reports and impirical observations, it appears that the normal curve is again in operation. Some women reported performing more poorly during flow, others notice no difference, and a few even report a better performance. This is certainly a fertile field for additional research, which hopefully will include more objective data.

This is just a brief outline of some of the knowledge we have been accumulating about women athletes in the past ten years. We know now she is not a physiologically inferior copy of a male athlete.

She is a unique individual in her own right and is capable of doing much more than she has been given credit for in the past and is more in need of encouragement to share in the benefits of sport than in protection from the physical demands of the activity.

Where do we go in the future? Hopefully, we won't insist on repeating on women every physiological study that has been done on men. Since we have many lost years to make up for, our time, effort, and money would be most efficiently spent on studies which have a strong theoretical basis. For example, everything we know about the effect of air pollution on humans pertains only to male humans. Is it possible that the lower hemoglobin levels in

women make them more susceptible to carbon monoxide toxicity — or do the smaller lung volumes of females decrease the effective dose so that the level of carboxyhemoglobin is equal to that of males in a similar environment?

Studies of women at altitude are almost non-existent in spite of an undercurrent of feeling among physiologists that women are less prone to altitude sickness. Fact or myth? There is no evidence one way or the other, because women are seldom included in the subject pool. The same is true of other types of environmental stressors which play a role in our response to exercise — stressors such as heat and cold.

My hope for the future would be that women be considered as part of the total population from which experimental samples are selected. Statistical theory is quite definite in telling us that inferences drawn from research data apply only to the population from which the sample was drawn. Until very recently the results from most exercise physiology laboratories could only be applied to a minority of the population — that 49% which is male.

Perhaps the most important thing we can do in the future is retain an open mind — and a touch of humility — for it was a scientist who wrote "...the articulation of the humerous with the ulna and the radius is imperfect...when...the racquet hits the ball, it tends to knock it high up in the air...the scientific fact remains that tennis is not a game for the human female." Are other cherished opinions of women's athletic prowess equally suspect? If we as a profession don't make the effort to sift facts from myths, it is highly unlikely that anyone else will.

ACCUMULATION AND APPLICATION OF KNOWLEDGE BY SIR/CAR*

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Part I

The University of Windsor is the home of the Canadian-American Seminar. Attendance and review of the publications of the first two decades of this high level intellectual look at common socially significant questions of the United States and Canada convinces the reader that these two cultures are fundamentally quite different politically, economically, socially, educationally, and cybernetically.[1] Despite the differences in Canadian and American culture, it can be said, in general, that these two countries have enjoyed a symbiotic relationship and have suffered through many common problems. One of these is the continuous debate on the model and method to be utilized in the accumulation and application of knowledge in study/research.

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Canadian-American Study/Research

Since scholarship and science by definition transcend political boundaries, it is not surprising to find that Canadians and Americans share the common concern for the most effective and efficient model and method for study/research. It is surprising and depressing to reflect on the amount of energy and resources which have been wasted on the dysfunctional acrimonious debate which permeates both of our countries on the relative merits of scholarship vs. science. In Canada, as in the United States, the pendulum of preference swings back and forth between hard sciences, (pure basic, reflective or curiosity research) and the soft sciences (applied action, frontier or exploratory study/research).

Ironically, it is neither scholars or scientists who control the swing of this pendulum, but rather research funding agencies and the society on which they depend (and to whom they are accountable).

The more dependent scholars and scientists are on environment for support, the more they will be forced to investigate questions which are important to the environment, and the more they will have to provide answers from which the environment and society can benefit. Similarly, the more the actual research work depends for its success and access to data within the environment and society, the more the environment and society will control the kinds of investigations and what kinds of experiments can and cannot be conducted.

Rightly or wrongly, research grant and funding agencies have come to the conclusion that the knowledge explosion and technological complexities, combined with demands for accountability, require a consortium of discipline/professional, study/research experts functioning under the participative direction of "a specialist in generalization" as research manager.[2] This is particularly true in social science research extending into human affairs. The 'isolation of the problem' is no longer feasible. The nature of the field of study makes it impossible always to control the course of investigation, since 'the problem' is accompanied by an individual or group of individuals. Access by the researcher to the data necessary for the investigation depends on obtaining permission from the participants, permission granted only in return for some benefit.

This philosophic and practical debate has particular relevance in an era of hard times in higher education. The increased social stress on universities and funding agencies for 'more scholar per dollar' and 'more relevance for the real world,' predicts an inevitable shift towards Frontier Action Research (with a concomitant decline to a magnificent few independent scholar-scientists closeted in the library and/or laboratory). The Corry-Bonneau Report in Canada[3] and the Coleman Report in America[4] dictate a decade of Frontier Action Research focused on problem solving-policy planning, rather than pure basic research focusing on curiosity seeking-discipline discovering.[5]

SIR/CAR maintains communication, finances, state of the art and the cycles of research/study spending suggest that it would behoove scholars and scientists (in both the hard and soft sciences) to join forces with practitioners to come to grips with socially significant questions likely to result in a payoff.

NAPECW/NCPEAM Scholarly Directions Research Committee

The swing of the pendulum to Frontier Action Research is a development which will be lamented by some, but applauded by many, physical and health educators. For many years eminent NCPEAM/NAPECW scholars and scientists such as Bruce Bennett, Pearl Berlin, Lawrence Locke and John Massengale have lamented either the dysfunctional conflict between theoreticians and practitioners and/or the overemphasis on expending study/research resources to "find definitive answers to specific minute questions, rather than tentative solutions to significant problems confronting our society."[6] Further rationale and reinforcement for the direction of higher education research was provided by your recent *Quest Monograph 25* focusing on *Graduate Studies in Physical Education*.[7]

The insightful interview by Daryl Siedentop with Walter Kroll, Lawrence Locke and John Loy, focusing on "Scholarship and Research in the Graduate Program" provides further reinforcement for a new model and method for accumulating and applying knowledge.[8] My colleagues in SIR/CAR agree with Siedentop when he states "lots of things that we're interested in investigating in physical education do lend themselves to programmatic research — team efforts, group investigations where perhaps a graduate student might come

in," with Walter Kroll suggesting that in the hard sciences, "almost every dissertation, thesis or faculty research project and research grant is done by everyone...it is very often impossible for one person to collect the data," and agree with John Loy who laments the fact that students do not appreciate the fact that "what he is doing 'at these odd hours' is fun, that there is some sense of craftsmanship involved, and there is some sense of play involved."[9] Locke may focus on the fundamental question in the accumulation and application of knowledge, namely, the relevance of

> the old tradition...that the student must choose a thesis or dissertation topic 'independently' because this gives him experience in identifying a problem. The second tradition that the thesis or dissertation must be done 'independently' of programmatic research because then and only then can it be 'original research.' Neither tradition makes much sense.[10]

My colleagues in SIR/CAR agree with Locke that our current structure which develops ability to do independent research is archaic and further with his rejection of the dichotomy between discipline/profession and applied vs basic as "a false, not particularly useful, distinction," or

> the only useful distinction probably goes back to the impulse for the research itself, and whether it arises from a problem perceived or from inside the investigator's head and his grasp of the body of knowledge.[11]

SIR/CAR further ascribes to Locke's abhorrence of "the dichotomous view of research as something the other guy does and practical things as the stuff we do..." and advances "a new set of guidelines for faculty membership which makes explicit the expectation that inquiry is part of every professors's activity..."

> ...it is possible to influence the values of people who primarily have been involved in service and teaching with regard to their feeling about the value of research. Furthermore, I think it is possible to help some of them accept the proposition that ordinary mortals can inquire intelligently. Convincing people of that is something we've not done very well. In fact, we've probably done very well at the contrary, making research seem mystical and difficult and abstract.[12]

Lawrence Locke's commentary in *Research in Physical Education* at the turn of this decade, which is reinforced by many more academics both within and without physical education today, appears, on the basis of our readings and interaction with our American colleagues to be an accurate description of the state of the art in the U.S.A. and is most certainly applicable to Canada.[13] A Canadian counterwork to *Research in Physical Education* would stress that our studies to date have been scrupulous in research design, impecable in statistical treatment, beyond reproach on validity, reliability and objectivity, but regrettably irrelevant in terms of social significance, policy change. We have been able to answer "how do we know?" but we have been embarrassed by the question "what of it!" In general on the Canadian and American scene Physical and Health Educators have been the best for "know how" process, but the worst for "know why" product.

My colleagues in SIR/CAR have come to the conclusion as many people have in North America that our study/research and post-graduate programs (particularly in the behavioral sciences) have failed to keep pace with the changing nature of our knowledge, the changing nature of our society, the need for new and different research roles in attacking complex social problems, and the sad lessons learned from previous attempts to achieve 'scientific respectability' at the expense of problem definition and understanding. For the most part we have been more interested in producing research technicians rather than analytic thinkers, and we have stifled our normal evolutionary growth with the concept that the real world of complex human problems is not really amenable to scientific study except in the laboratory setting. There has been a single role model which has pervaded our programs, namely, the experimental research-scientist model, and regardless of the nature of the problem or the talents or our theoreticians and practitioners every "respectable project" conforms to this model.

Stimulated by our American colleagues in the NAPECW/NCPEAM, influenced by

progressive discipline/professional groups of scholars and scientists, and motivated by eminent international study commissions such as the UNESCO Faure report; my colleagues at Windsor and eventually throughout Canada and United States became convinced that there was a need for not only multi-or interdisciplinary-professional studies but indeed trans-or metadisciplinary-professional task force study/research brings together theoreticians and practitioners to combine science and social action.[14]

Accumulation and Application of Knowledge

The Canadian-American constraints on funds for higher education in general and research funding-foundations in particular, mitigate for increased astuteness on the part of study/research enthusiasts who will have to adhere more stringently to the basic SIR/CAR tenets of raising research funds:

1) Individuals and groups cannot secure grants if they do not apply.
2) Research grants are not awarded primarily on Pulitzer Prize rhetoric proposals or research design and statistical exercises but rather the relevance of the research to either practical problems or evolving theory.
3) Research organizations are just that — organizations subject to the same stresses and strains as other social institutions. In an era of accountability both hard and soft sciences should address themselves to projects with a high probability of immediate or intermediate payoff and/or significant areas being overlooked.
4) All things being equal, task force proposals will obliterate individual proposals (particularly in Frontier Action Research or social science endeavours).
5) All things being equal, non-profit voluntary research foundations, institutions or collegiums will be selected for specific projects over non-voluntary or profit research foundations and institutions, since accountability is being stressed and the cost/benefit is higher in the voluntary mutual benefit service organization.
6) Topics to be studied can be found on the front pages of any local, national or international paper, or in radio or TV lead stories. The same social stresses which confront society are confronting social science research institutions. In an era of economic decline endowment funds are being devastated. Research Foundations find themselves dealing with the marginal dollar and a limited amount of opportunity cost. In other words, whatever the research funding organization does, it does at the expense of something else it might be doing, and therefore there is a tendency to deal with immediate and intermediate socially significant problems, as well as areas in which there is a likely breakthrough from a theoretical point of view. Research organizations are very conscious of the opportunity cost of each project that they commission.
7) When Ford Foundation suggests that ecology is a problem or Canada Council decides that a high percentage of its resources will go into exploration studies, rest assured that university researchers and administrators will spontaneously perceive these areas as attractive and relevant.
8) Do a mini-study (or at the very least a pilot project) and then write the proposal to secure a grant for a more thorough study. The complexity of task force research requires increased brainstorming by the group on conceptualization of the project and partial operationalization and experience in methodology prior to submitting a proposal for scarce resource funds. This is particularly essential as contract research comes more in vogue and research institutes or collegiums are forced to be more flexible and refashion both their human and physical resources.
9) Develop the project to fit the funds. The argument that research cannot be conducted because research funds are not available is, in many instances, a cop-out. Teaching, coaching, administration and professional service are frequently carried on in less than an ideal situation. Most human endeavours are initiated on the proverbial 'shoestring.' There are many resources (people, place, program and purpose) available to initiate research projects. Success breeds success, and if a study can be initiated in embryo form, worthwhile study will attract research funds.
10) It is frequently advisable to cost account in terms of minimum, medium and maximum costs. When projects must be cut back, they can be reduced by a) becoming more specific or b) remaining as general, but probing in less detail. A rule of thumb would

be that exploratory studies should be general in nature in order to identify fruitful areas of specific study.

SIR/CAR Structure and System

The shift in system from relatively independent basic research to task force action research teams requires a new organizational structure (accommodating theoreticians and practitioners) and a new action-oriented research model and method (allowing tentative solutions to significant problems, rather than definitive answers to minute questions). Inflexible university discipline structure and the rigid basic research model, method and technology are inappropriate to meet the challenge of today's future shock, conflict and change. Windsor's Sports Institute for Research (SIR) and Change Agent Research (CAR) presents a first generation alternative in terms of flexible research organization and frontier research model and method.

Notes and Bibliography

1. Listed below are the titles for the first seventeen annual Canadian-American presentations and publications, as well as the project focus for the fall of 1976. All of these publications are available through the Canadian-American Seminar Office, University of Windsor, Windsor, Ontario, Canada, N9B 3P4, Attention: Dr. J. Alex Murray, Director.
   - 1960 - 61 2nd, & 3rd Seminar
   - 1962 - 4th Seminar, "Where is N.A. Going?"
   - 1963 - 5th Seminar, "North American Solidarity"
   - 1964 - 6th Seminar, "The Future of Canadian-American Relations"
   - 1965 - 7th Seminar, "Canadian-American Planning"
   - 1966 - 8th Seminar, "The International Megalopolis"
   - 1967 - 9th Seminar, "Canada and the United States In The World of the Seventies"
   - 1968 - 10th Semianr, "Canadian/American Interdependence: How Much?"
   - 1969 - 11th Seminar, "Labour, Business and Government in North American Society"
   - 1970 - 12th Seminar, "Canada...The Unknown Neighbour"
   - 1971 - 13th Seminar, "Alienation and Violence in the North Amercian Community"
   - 1972 - 14th Seminar, "Information Processing and The Right to Privacy"
   - 1973 - 15th Seminar, "Sport or Athletics: A North American Dilemma"
   - 1974 - 16th Seminar, "North American Energy in Perspective"
   - 1975 - 17th Seminar, "Mass Transit: The Urban Crisis of North America"
   - 1976 - 18th Seminar, "Health Delivery Systems"

   These volumes may be purchased separately at $7.50 each for the 1st through 13th Seminar and $10.00 each for the 14th through 18th Seminar or as a set at the special reduced price of $80.00 (limited time only).
2. See E.J. Miller and A.K. Rice, *Systems of Organization: The Control of Task and Sentient Boundaries*. (London, England:Tavistock Publications, 1970).
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7. *Graduate Study in Physical Education, Quest Monograph 25* (Winter issue, 1976).
8. Daryl Siedentop et al, "Scholarship and Research in the Graduate Program," *Quest Monograph 25* (Winter issue, 1976), pp. 86—100.
9. Ibid. pp. 98, 94, 88—89 respectively.
10. Ibid. p. 90.
11. Ibid. p. 94.
12. Ibid. p. 98 and 100.
13. Lawrence Locke, *Research in Physical Education* (New York: Columbia Press, 1969).
14. See Philip Kotler, *Marketing Management: Analysis Planning and Control* (3rd ed.) (Inglewood Cliffs: New Jersey: Prentice Hall, 1972); Bernard Trotter and A.W.R. Carrothers, *Planning for Planning: Relationship between Universities and Governments: Guidelines to Process* (Ottawa, Ont.: Association of Universities and Colleges of Canada, 1974), and *Proceedings of the NAPECW/NCPEAM Conferences 1970 through the present, and* Edgar Faure, *Learning to Be: The World of Education Today and Tomorrow* (Paris, France: UNESCO, 1972).

PART II

The Theory of Change Agent Research

The ultimate goal of all study/research is to reduce the probability of seeing the world as we would like to see it exist rather than as it does exist — ruling out plausible rival hypotheses which make comparison ambiguous and tentative. The ongoing controversy as to whether to realize this ultimate goal by Pure Basic Research or Frontier Action Research seems interminable and futile. The classic distinction here has been between (1) pursuit of knowledge for its own sake, and (2) pursuit of knowledge about specific things to be applied for specific purposes. There has been a good deal of controversy, however, between, on the one hand, those who have sharply criticized field studies for slipshod sampling, failure to document description of variance and the wholehearted acceptance of impressionistic accounts and, on the other hand, those who are opposed to sampling, too numerical procedures for quantification on the ground that the social system as an organic whole cannot be investigated by quantitative methods. This report suggests that the issue and controversy have been falsely focused: the situation is that we are not all for or against quantification on an either-or basis: the choice is not between hardness and softness. Quantative data is not always hard and the qualitative soft and deep.

The problem is really one of information. There are several kinds of information: what kinds of methods and what kinds of information are relevant? What is the facility of different methods in getting this information for the different purposes? Incomplete and imperfect answers should be and are useful: we frequently must make decisions in the light of imperfect data. The real problem is to be clear about what is imperfect information and how this can be improved to enable us to achieve our purposes.

Invariably researchers have a short memory and forget that study and research, art and science should collaborate rather than confront. Theoreticians and practitioners, scholars and scientists, are in an evolutionary process ranging from descriptive to predictive as outlined in the model below.

The advantages and disadvantages of these various stages of the art and science of research are well explained by Campbell and Stanley[1] in their benchmark text, *Experimental and Quasi-Experimental Design for Research*, which is summarized in the chart below (amended and including a list of SIR/CAR projects utilizing the various designs)

Descriptive Ho testing exploratory

1. Anecdotal Records — objective observations and records.
2. Case Study — systematic analysis of space, time and form.
3. Problem Solving — short term — stimulus response.
4. Cross sectional Survery T_1 — no backward or forward look.
5. Cross sectional Survey T_1—T_n — significant N over long periods of time.
6. Longitudinal slice — same subjects over time and difference beginning to and or at specific times — ex. G&D.

Inferential theory testing

7. Environmental impingement and determinism (idiographic).
8. Genetic determinism or structureal heredity (nomothetic).
9. Construction determinism — reafying a quality or qualities to allow prediction.

Whenever possible we should substitute experimental for descriptive and predictive for descriptive.

Study/research (experimentation) is taken in its etymologically correct meaning of 'to try, to test' — rather than in the misuse sometimes found in the less perspicacious (or less classically-educated) followers of the establishment, who interpret it as referring only to manipulative research or, still more erroneously, only to manipulative research in the laboratory.[2] SIR/CAR has not defined experimental in the narrow sense, implying a method in which the experimenter exercises strict control over the values of the central independent variables. Rather, we have included in the definition all study/research in which important questions in the area of sport and society have been studied with techniques that are either logical (scholarly) or mathematical (scientific) in their treatment of the critical variables and the derivation of justifiable conclusions.[3] It is this broader definition of experimental which is employed as the criteria for selecting study/research projects included in the purview of SIR/CAR.

The Cycle of Science model and the Reality Rectangle below show symbolically the two viable alternatives to research.[4] As the Cycle of Science indicates; scholars and scientists interested in understanding a phenomenon and/or the universe can either (1) go from *observations* or evidence (obs) to description of patterns in the *sample* observations obtained (ds), to description of patterns in the parent class (or *universe*) to which the sample belongs (du), to *explanations* or theories to account for described observations and guide further investigation (expl), to descriptive inference derived from *theory* (dt), to empirical interpretation in *operationalized* or procedural terms of theoretical inference to be investigated (do), and return ultimately to *observations*; or (2) reverse
the process going from explanation to theory to operationalization to observation to description of the sample and description of the universe, etc. The lower half of the Cycle (observation, description of the sample and description of operationalized theory—obs, ds, do) deals with *methodology* while the upper portion (description of the universe, explanation, and descriptive inference derived from theory—du, expl, and dt) deals with *theory*. Similarly, the right hand half of the Cycle (obs, ds, du) deals with *practical* empirical-specific explanations constructing and revising; while the right hand half of the Cycle (expl, dt, do) deals with *theoretical* or general explanations, development and testing.

The Rectangle of Reality similarly shows that in understanding nature or reality both practitioners and theoreticians have a role to play.[5] We can either proceed *inductively* from the particular to the general; or *deductively* in reverse order. In the inductive process we take heuristic measurements and conceptualize a model from the mass of data; whereas in the deductive process we go from theory to conceptualize and operationalize so that we can take measurements to test our model on the basis of the mass of data which we will accumulate. In the inductive process the professional deals with the concrete, extrinsic and instrumental to observe or bring about change to be applied for action. In the deductive process disciplinarians focus on the abstract, intrinsic and essentialistic in order to understand nature through pure and/or basic research.

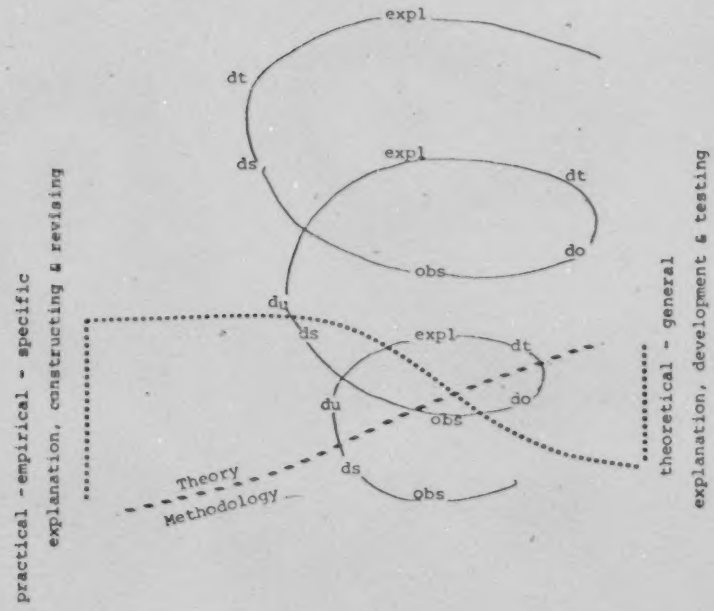
Both approaches have contributed appreciably to the advancement of mankind. Pure Basic Research system (emphasis on theory, Cycle of Science or deductive in the Reality Rectangle) advocates an operational procedure with research theoreticians developing a

THE CYCLE OF SCIENCE

Explanation constructing and revising to ...
(observation to description to explanation)

Explanation developing and testing to ...
(explanation to description to observation

Explanation constructing and ...



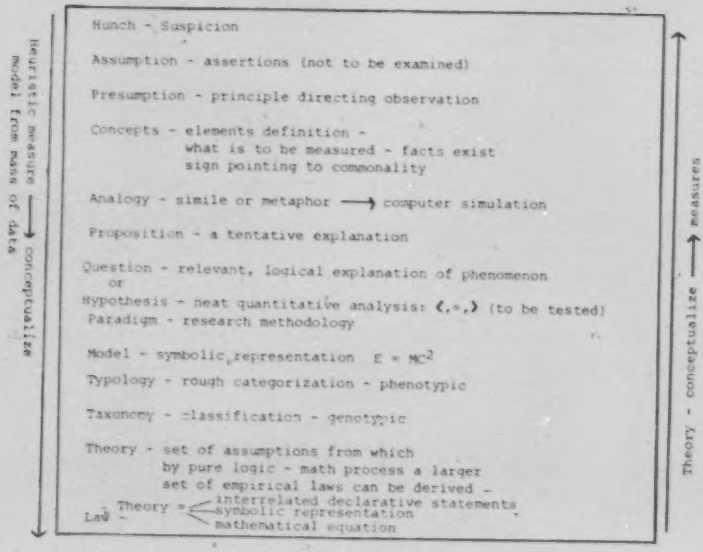
obs: observation or evidence
ds: description of pattern in sample of observations obtained
du: description of pattern in parent class (or universe) to which sample belongs

expl: explanation or theory to account for described observation and guide further investigation
dt: descriptive inference derived from theory
do: empirical interpretation (in operationalized or procedural terms) of theoretical inference to be investigated

discipline and
Reality—Research—Science—Nature

concrete—extrinsic—instrumental
(quantity) profession—change—applied and action

inductive—particular


Hunch - Suspicion
Assumption - assertions (not to be examined)
Presumption - principle directing observation
Concepts - elements definition -
what is to be measured - facts exist
sign pointing to commonality
Analogy - simile or metaphor ⟶ computer simulation
Proposition - a tentative explanation
Question - relevant, logical explanation of phenomenon
or
Hypothesis - neat quantitative analysis: ⟨,=,⟩ (to be tested)
Paradigm - research methodology
Model - symbolic representation E = mc²
Typology - rough categorization - phenotypic
Taxonomy - classification - genotypic
Theory - set of assumptions from which
by pure logic - math process a larger
set of empirical laws can be derived -
Theory = interrelated declarative statements
Law - symbolic representation
mathematical equation
Heuristic measure ⟶ model from mass of data conceptualize
Theory - conceptualize ⟶ measures

abstract
(quality)
discipline—understanding—pure and basic

intrinsic

deductive—general
essentialistic

Goal—reduce the probability of seeing the world as we would like to see it exist rather than as it does exist—rule out plausible rival hypotheses which make comparison ambiguous and tentative

Development of ability to be objective and value free
in administrative analysis with emphasis on
EFFECTIVE
Get the job done
Achievement (Halpin)
Initiation of structure (Stogdill) and
EFFICIENT
Least expenditure of human and physical resources
Maintenance (Halpin)
Consideration (Stogdill)
Don't talk about good and bad, or right and wrong,
rather effective and efficient.

middlemen subsequently disseminating the knowledge to practitioners and professionals. The focus is on the discipline. The great shortcoming of this procedure has been the tendency of disciplinarians to restrict communication among themselves or an abortion of the knowledge as it passes from theoretician to middleman to practitioner/professional. Applied Action Research has the disadvantage of neglecting the direction of theory and/or

of failing to cluster the results of the heuristic data bank of the community of scholars/scientists. Change Agent Research, on the other hand, advocates a combination of practitioner and theoretician, with the emphasis on professional rather than discipline. Advocates maintain that this not only opens the line of communication from the theoretician to practitioner, but also from the practitioner to the theoretician. Both have a great deal to contribute in dealing with problems of society. Kurt Lewin stated "There is nothing so practical as a good theory;" SIR/CAR advocates agree but go on to point out that "There is nothing so theoretical as a good practice". Change Agent Research falls between Pure Basic Research and Applied Action Studies. Pure Basic Research is at one end of the spectrum with almost complete freedom in selecting processing and publishing results but seldom an opportunity to test any direct applications of the finding on practical problems; whereas, Applied Action Study researchers frequently have the satisfaction of seeing their findings

Research Role Methods

SIR Model Variables	Pure Basic Research Hard Science Scholarship Reflective Curiosity	Change Agent Research Profession/Discipline Scholar Scientist Frontier Action Research	Applied Action Studies Soft Science/Scholarship Mission Oriented
1. Ultimate Goal	Scientific Knowledge & Understanding Theory — What & Why Discipline Oriented Why Canadian & European Scholar	Institutional Group Change or Social Change based on Study Research Practice & Theory Profession Discipline How & Why Canadian/American Synthesis	Problem Solving Applied Solutions to Practical Problems Practice — What Profession Oriented How to American Intellect
2. Conflict Problem Issues Methodology	Rigorous Design & Statistic Treatment Mathematical Quantitative Freedom in Selecting Problem & Stating Results but little Application	Logic & Mathematics Qualitative & Quantitative Access to Data, Problem Statement and Publishing but not "not publishing"	Statistical & Logic Quantitative Analytical Application but little choice in Selecting Problem & Publishing
3. Structure	Natural Scientist Experimentation Descriptive Library Laboratory	Policy Action Research Exploratory Explaining, Predicting Community Field Laboratory	Engineering Inferential Predictive Field Studies
4. Individuals & Groups	University Scholars & Scientists Individual Scholars/Scientists Discipline Oriented and Reporting to Peers & Granting Agencies	Practitioners & Theoreticians Community & University College Task Force Reporting to Organization, Public, then Peers Profession Discipline Oriented	Research Contractors Producers Task Force Profession Oriented and Reporting to Contractors
5. Stress Value Perspective	Ethically Neutral Value Free No Advocacy Universal Perception Scholarship Science Truth/Knowledge Confrontation	Value Free (Probable & Impact) Value Laden (Desirable) Challenging Dominant Canadian/American Value Orientation No Advocacy in Research — Unplanned Change Effective Efficient Achievement Maintenance Structure Initiation Consideration Compromise (Dialectic Process)	Dominant American Value Orientation Advocacy Investigation and Legislate Study Research — Planned Change Good and Bad Right and Wrong Cooperation
6. Strain Internal pressure for Problem Selection External Adequacy	Theoretical Importance of Segmental Problems Microscopic Rigid Model & Method Coherence correspondence complete information & data	Practical Social Significance & Theoretical Development of fundamental ISSUES Macro and Micro Flexible Model & Method Perspectiveness significance sufficient to meet practical & theoretical state of art	Practical Importance of Important Segmental Problems Macro Applicable Model & Method Usefulness adequate data & information
7. Trend change Perspective Goal Intellectual Product	Functionalism Intrinsic Value Organizational Research Analytic Schemes — Empirical Generalizations Product Parsimony & Esoteric Development of Theory	Form follow Function Extrinsic & Intrinsic Value Organizational Analysis Development & Research Model & Method Change General Cycle Trends & Tendencies Product Process Laymen's Terms & Redundancy Application to Problems & Development of Theory	Pragmatism Extrinsic Value Organizational Development Implication for Action Process Professional Language Application to Problems

put into immediate practical use but seldom an opportunity to decide how, what, and why they conduct particular studies. Change Agent Researchers have some freedom to select their line of study/research, usually have complete control over the model and methodology to be utilized as well as the right to present and publish results, and sometimes have the satisfaction of knowing that they have influenced it, if not determined, the direction of society and perhaps public policy. These distinctions are brought out on the Research Role Model chart, below.[8]

Regardless of the approach being utilized, theoreticians and practitioners involved in research must avoid consideration of good or bad ends and right or wrong means and focus rather on *effectiveness* and *efficiency* (initiation of structure and consideration in Stogdill's[7] terms, achievement and maintenance in Halpin's[6] terms, getting the job done with the least expenditure of human and physical resources in laymen's terms). As pointed out above, the ultimate goal is to see the world as it actually is rather than the way we would like to see it exist.

In summary we can accumulate knowledge individually or collectively in multi disciplinary (confrontation), interdisciplinary (collaboration) or trans or meta professional/discipline (cooperative) Task Forces.[9] Similarly, application of knowledge can employ the traditional three step process of Researcher to Middleperson to Practitioner or a progressive process combining Researchers and Practitioners.

SIR provides a structure, CAR provides a system analysis model, and IDEA provides a study/research methodology for Change Agent Research on the Canadian-American scene. Change by definition and change producing processes have a habit of leaving behind them those who initiated them. Once a model and method is perfected, there is no 'raison d' etre' for the group who invented it. The successful system is absolete. SIR/CAR is far from perfected however, and flexibility and innovation for 'unplanned change' are indigenous to Change Agent Research. We must all avoid the tendency to 'fall in love with our models.' Innovate and improve. You are invited to join SIR/CAR and/or initiate a similar voluntary mutual benefit society in your 'community'.

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CARDINAL RESPONSIBILITIES OF UNIVERSITY FACULTY: ACQUIRING, GENERATING, AND TRANSMITTING KNOWLEDGE

Waneen Wyrick Spirduso
University of Texas
Austin, Texas

A faculty member of any of the hallowed hall of ivied institutions, has, after disposing of the real priority activities such as wangling a convenient parking sticker, engineering 50 yard-line tickets to the ball game, and ensuring that every one of her colleagues has paid her coffee money, three major functions: acquiring knowledge, generating knowledge, and transmitting and applying knowledge. A great deal of academic, political, and community quibbling goes on regarding the question, "knowledge about what?", but little real controversy surrounds the identification of these three functions as primary ones of the university professor. Some academicians haggle over the relative proportion of responsibilities with regard to generating or acquiring knowledge, but only a rare mad scientist or two ever verbalizes a doubt about the professor's function of transmitting knowledge. In keeping with the spirit of tradition and with the topic assigned to me for the section of this program, I acknowledge and salute the transmission of knowledge as a *raisons d'etre* of the professor, and move on to a more detailed discussion of the two other functions of the professor, the acquisition of knowledge and the generation of knowledge. Some final remarks regarding the difficulties we experience in the transmission and application of knowledge will also be made. The epilogue includes a small "soap box" tirade, which is your price to pay for asking me to speak.

The Acquisition of Knowledge

The acquisition of knowledge, like finding a parking place on campus, has become a harrowing experience. So many facts are available in so many journals, books, monographs, proceedings, abstract listings, unpublished conference papers, microcards, dissertations, and theses, that it is literally impossible to accumulate all the facts that relate to the major discipline of the professor. Assuming that a given professor does absolutely nothing else but accumulate facts, still not enough time is available. Of course accumulation is not the real problem. The real problem is detecting accuracy and relevancy among the accumulated pile of facts, and that process requires substantial knowledge about the pile of facts. Since it is impossible to process facts that are accumulated in a large area as, for example, "human movement", a natural solution is to choose a smaller pile. Thus, the academician may move in her evolution from undergraduate to professor, from a specialist in physical education, to a specialist in motor performance, to a specialist in motor control, to a specialist in single motor unit control. That is not to say that she doesn't know the general shape of some other piles of facts, several specific ways to organize other piles, or even a few specific facts in these other piles. But accumulating, sorting, and identifying noise or irrelevant facts from relevant ones so that these can be organized into a status of knowledge can only be accomplished with a narrowly defined and manageable pile of facts. I should also mention that the process is complicated because facts have a nasty habit of becoming non-facts, or disappearing after you've just categorized them. In addition, facts tend to change their characteristics relative to other facts at the very moment you're sorting them.

It is also almost impossible to acquire minimal knowledge without a heavy and continued reliance upon computer capabilities. The scholar has for survival developed a lifestyle of

consistent study, periods punctuated with systematic weekly or monthly computerized retrieval of related facts. Several common retrieval systems are used, such as MEDLARS, DALTRIX, ERIC, PASAR, SIRLS, MINFO, LEXICON, NCMHI and the ISI Citation Index. It is also common for academicians to develop their own data base for retrieval systems. Sole dependence upon these retrieval systems, of course, is unwise, because their efficiency is totally dependent upon an accurate communication between the searcher and the programmer. In addition, the quality of output is dependent upon the integrity and accuracy of the programming system. Let me provide a simple example. Since many of these systems are dependent upon the author to provide the descriptor, there are as many persons assigning descriptors as there are authors in the system. If one author assigns the descriptor "athlete" to his study while a searcher is using the descriptor "athletic activity", the searcher will not obtain the study. Similarly, if the searcher spells a descriptor "motoneurone" while the system has assigned it "motorneurone", it will not be retrieved. Finally, if an author conceptualizes his study as a study of muscle fatigue and so describes it, the system user who is searching with the descriptor "exercise" will not retrieve the study.

Nevertheless, computer retrieval systems are powerful tools because in the process of retrieving they also generate information and provide bases for applications. To give an example, at the The University of Texas we have developed an information retrieval system based on Computer System 2000 called PIRFA, which contains our own data base related to the physiological capabilities of women in physical activity. Not only can we retrieve from our system all citations for each descriptor by itself or in combination with any other descriptor/s, but the system has tally characteristics on several keyed elements such as author, author's location, descriptor and its combinations, and the periodical in which the citation is published. The impact of this is that new information is generated which may either be descriptive or catalytic in the development of new knowledge. For instance, the following questions may be answered with the system:

1. What periodicals most frequently publish articles on specific topics? Information of this nature provides a basis for authors of studies to know which periodicals might be receptive to their manuscript. In addition, it may assist librarians or Directors of Women's Studies Centers in knowing what periodicals to which to subscribe.

2. Who are the authors of articles related to sex differences in maximal oxygen uptake? From the computer's answer to this question we learn not only who they are, but what authors are most prolific in which area. The names of experts on a topic immediately surface, providing institutions with some basis for selecting guest speakers and agencies with a reason for appointing consultants. This type of knowledge acquisition provides a more intelligent way to select speakers or consultants than calling a friend and saying, "who do you know who knows something about strength?"

3. Where is the most active research underway? By tallying authors' locations, we can identify the hot spots of research activity and thus have some basis for counseling prospective graduate students or determining future seminar or workshop sites.

4. What articles are available related to pregnancy and physical performance? Not only do we retrieve the number and identification of these citations, but we also get a clear indication of which topics related to physiological capabilities of women are being actively researched. We discover the unresearched areas. This information can be applied by professional associations, federal and state agencies, or private foundations.

5. That information areas basic to developing educational equity for women need researching? Where are the obvious gaps? Organized factual information or evidence of the absence of it can be a powerful tool in political debates.

6. What are the trends and patterns of research on topics relating to women in sport, physical activity, or physically demanding occupations? By analyzing the authors of specific topics, the location of research activities, and the topics of research over a 5 or 10 year period, a very clear picture of the changing productivity of both researchers and institutions can be assessed.

This abbreviated summary of the power of computerized retrieval systems in the acquisition of factual information should provide ample evidence that systemized retrieval generates knowledge as it retrieves, and in addition provides the basis for a multitude of applications to practical decision rules.

Alas, however, our problems are not solved, but changing. In using the computer, we are driven before it not only to retrieve information but continually to learn new techniques and

methods in the area, and in essence to, "tool up" every few months. Once again our friendly computer provides valuable assistance in acquiring and learning information. Many techniques are currently packaged in computerized learning modules, so that the scholar has only to interact with the computer in his own time (within the constraints of the computer's time). Computerized Biometrics courses, are available, for example, in which one may take an entire course on the application of statistical concepts to biometric data. A lab manual is utilized and the learner interacts via teletype with the computer. On our laboratory teletype, we telephone the main computer and direct it to generate frequency distributions of various parameters, locate means, median, modes, and provide us with other descriptive statistics about the distribution. Thus a conceptual sophistication about statistics can be developed by allowing the computer to generate theoretical data sets. Graphic and dramatic demonstrations of the influences of various distribution parameters on statistical outcomes are displayed to the student. Almost unlimited capabilities in the manipulation of distributions can evoke creative and ingenious questions of even the less erudite. CONDUIT is an organization, supported by the National Science Foundation, whose purpose is to supply computerized curriculum materials, as well as to facilitate the development of computerized learning materials on individual campuses. Presently, CONDUIT has four programs that could be of value to us: Linear Algebra, Biomechanics, Statistics and Probability, and Cognitive Psychology—which deals with information processing. Computer graphics are made use of in these packages. Almost any topic that requires conceptual manipulations of large masses of data or three dimensional display can be readily comprehended through conversations with the computer.

To summarize this obligation of the professor, then, we can say that a primary function is to acquire knowledge and since the factual basis of knowledge is continually accumulating it requires the development of a lifestyle of study and the use of computerized techniques. No choice is available to us. Professors can't survive in the academic community without acquiring knowledge. The academic marketplace is teeming with young PhD's who are highly specialized, having two or three research publications prior to the completion of their degree, and armed with unbelievably sophisticated technical, statistical, and conceptual knowledge to make their claim as valuable citizens in the academic community. As the financial resources for higher education continue to dwindle, academicians will really have "to know their business" and be able to communicate not only the content of their discipline but its worthiness for funding. Administrators will no longer support programs "just because they have always been funded", or "to maintain a balance between the professions and the sciences", or "because they already have large numbers of students in the program". The job market and the academic scene are pushing academicians to know more and more, to be more and more skilled. Generalists with a superficial knowledge about a large number of areas will not survive in future academic communities.

The Generation of Knowledge

Let us now turn to the second (though not in importance) obligation of the professor, and that is the generation of knowledge. To generate knowledge means to reveal some new relationship, to describe with an understanding something that has not been previously described or to conceive some model that has potential power for predicting relationships or occurrences. This entails scholarly activity, or research. The conduct of research requires a substantial knowledge base and an absolutely thorough knowledge of some specialization area. Competent research productivity also requires practice, and since the test of good research is that it withstands the scrutiny of other researchers, it requires evaluation. *All* college professors, who work in graduate programs, have an obligation to conduct research and to submit that research to peer review. One of the best ways to acquire knowledge and to determine whether you are asking important questions and selecting appropriate strategies to answer those questions is to submit a manuscript for publication. Peer review is objective, and almost always instructive. Professors who continually supervise theses and dissertations and who do not themselves annually submit manuscripts for publication are academic charlatans: this is not to say that the production of research, or the generation of knowledge is the only function of a college professor, but it is to say that when professors place themselves in the position of being an expert on research, i.e., supervising graduate students in research, they are obligated to be productive and to place their products under the scrutiny

of their academic peers. It is a tragedy that some departments in our field award masters and doctorates and have not one single research publication produced from the entire department, ever.

Unfortunately, the generation of knowledge is becoming more and more complex and requiring more and more sophisticated knowledge and technology. [1]Each advance in science results in even more intricate technical expertise, which in turn requires more and more financial support in terms of capitol outlay and maintenance. Furthermore, an inverse relationship exists in science between capitol investment and productivity. The easier to answer, larger questions have been answered, leaving us now to inquire into more delineated topics, a more or less, sorting of smaller and more homogeneous piles of facts. In other words, it costs more and more to learn less and less, and the time is upon us when administrators are demanding that the cost of our answers be accountable. A few physicists are already questioning whether the knowledge derived is worth the enormous expenditive of funds necessary to obtain it. Paul Dirac, Nobel Laureate, has claimed, "that as far as can now be ascertained, the research of today's leading high-energy physicists has no presently foreseeable practical application. It is an investment, he implies, that society makes purely for the curiosity of high-energy physicists". The behavioral sciences, however, are a long way from this state of affairs. We are just beginning to move into the highly technological stage, where heavy expenditures of funds for sophisticated instrumentation, computer analysis, and research assistants are necessary. Team research is almost a necessity in order to answer really important multivariate questions. The days of the lonely scholar who, huddled in the library basement with a spider web connecting his hunched back to the shelves above him, meticulously sifting through heavy volumes, have dissolved into history. Today's questions are answered by dynamically interacting multidisciplinary teams funded by the government, the university, the school district, or the state agency. Today's generators of knowledge demand verfication and replication, and they are not professionally polite enough to allow errors to go without the criticism they deserve. Hopefully, today's researchers dissociate themselves personally, from their work enough to accept criticism and reveal the facts whatever they are. They do not settle for experimental designs that are the easiest, most workable, or identifiable with a school, department or person. However, if society is questioning physicists in terms of cost-accountability, it doesn't take much imagination to estimate the extent to which research in less prestigious areas such as the behavioral sciences, will be held accountable. Our questions have to be worthy of the cost necessary to generate the answers.

Transmission and Application of Knowledge

Finally, a few closing remarks should be made about the third obligation of the professor, the transmission and application of knowledge. Teaching and application of knowledge are made extremely difficult for the academician, because of the accumulation of facts, or, to express a quote from *Science* magazine, "The flow of valuable ideas is impeded by an enormous mass of trash". A real possibility exists, however, that the application of knowledge is made difficult because we have been accumulating facts and not knowledge. Knowledge, used in the sense of understanding as in "a knowledge base" implies that the sorting, interpreting, and organizing of the fact piles has already been accomplished. *Knowledge* really can't be accumulated. Accumulation means heaping, massing, bulking, stacking, or piling up without organization. Dust accumulates on the table, garbage accumulates in the alley, leaves accumulate in the yard, traffic tickets accumulate in the court house, kitchen drawers accumulate odds and ends, and juvenile delinquents accumulate on the corner drugstore. But knowledge doesn't accumulate, it evolves, unfolds, grows, develops, or proliferates.

One of the primary reasons why education in general and physical education in particular has such a difficult time applying and disseminating knowledge, is that we have spent 50 years accumulating facts rather than developing a knowledge base. Our national association has failed to support financially any research leadership that could have guided our national research efforts into the development of a knowledge base for motor performance learning

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[1]Wheeler, "Sciences Slippery Slope", *The Center Magazine*, Vol. VIII (1) 64-72, Jan-Feb, 1975.

and development. Even the most productive individuals in our field have a list of publications, many of which have little relation to each other. The topics of research seem to be arrived at almost at random, with no obvious direction nor goal. The consequence of all this flailing about at reasearch efforts is that we have an accumulation of facts that is very great, but unmanageable. Since the facts are not organized into models we don't know which to teach and we can't tell whether our application didn't work because the concept wasn't true or because our application was in error.

What can be done to rectify this dismal scene? University professors can attend to their three major obligations: the acquisition of knowledge, the generation of knowledge, and the transmission and application of knowledge, particularly the first two obligations. Most of us need retooling. In the generation of knowledge, we can delimit our area of specialization, select some goal of understanding for the area, and direct each of our research efforts toward that goal. Administrators can reward faculty who meet their obligations, facilitate their technological and computer needs, and encourage multidisciplinary team research. The national association can support the development of knowledge in our field by providing leadership and outlets for publication and scholarly interaction. More pointedly, this association, the NAPECW, in conjunction with the NCPEAM, can assume a leadership role in the protection, coddling, and nurturing of ideas and the development of knowledge. This is the only one of our professional associations that is uniquely related to the functions of our profession in universities and colleges. Several professional associations for secondary level, elementary level, sports associations, political affiliations, and related agencies exist, but this is the only one that is specifically composed of university and college people who should be vitally concerned about the development of our knowledge base. Since universities, among all other educational institutions, have a unique function of acquisition and generation of knowledge, it is vital that the one association NAPECW/NCPEAM, assume the fostering of these obligations as its number one priority.

As the AAHPER ranks swell while the research budget declines, and the hoards of associations dedicated to sports performance, sports regulation, femininism, rehabilitation human sexuality and what-have-you increase, it is my hope that one — at least one — professional association will continue to be concerned — not about the accumulation of facts, but about the development of the knowledge bases in our field of specialization.

LEADERSHIP FUNCTIONS AND WOMEN IN HIGHER EDUCATION

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I was delighted to be invited to speak for your conference this evening about some ideas related to women and leadership in higher education. Since most of you are professional women, you serve as models to other women of what can be achieved by a woman. In this sense, each one of you is a leader. Not all of you may aspire to become administrators in higher education but as physical educators, you have and will continue to have a tremendous influence on the attitudes of young women and young men as well as your colleagues of both sexes.

Attitudes

The attitudes of society toward the development of the potential of each human being need changing, and it will require a lot of effort on our part both as educators and as parents to bring about a change. The present socialization processes reinforce the development of passivity, nossrieness and dependence in girls while reinforcing the opposite characteristics of dominance, aggressiveness and independence in boys. The girls traditionally are not encouraged to achieve much more in life than to become successful wives and mothers, whereas boys are generally encouraged to develop the talents they have for the purpose of becoming successful in a career. The boys also learn that they will become husbands and fathers, but that these roles are secondary to their careers. Although the girls may be expected to work before marriage or after their children are grown, this is usually considered incidental in their lives. Yet statistics from the U. S. Department of Labor reveal that more and more women are being forced into the labor market for economic reasons — not for 'pin

money' or luxury items. It is time to develop the attitude that women need to be able to support themselves just as imperatively as men regardless of their marital status.

The appropriateness of the present type of socialization process for the fullest development of the talents of all the members of our society is being questioned. As a result of her study of parental authority patterns with 146 preschool boys and girls and their families, Baumrind[1] hypothesized that preschool girls are as achievement oriented and independent as preschool boys. She suggested that if girls were not punished for these qualities they would continue to be achievement oriented and independent in later life. To develop the attitude that these qualities are important for little girls, our young children need exposure early in their lives to a greater variety of role models assumed by women both within and without vocational situations. As you know, work is being done to help accomplish this by revising descriptions of female characters in school textbooks.

From birth we teach our boys self-confidence. Girls need to learn self-confidence, too. Instead we teach them over-concern about what friends and parents will think of them which results in ambivalence and self doubting. As teachers of sports, you have an important responsibility for helping to train young women to develop self-confidence. As a part of developing self-confidence and a positive self-concept, girls have to learn to like their bodies and to learn that they have fine brains which need to be developed to help solve not only their own problems but society's problems as well.

Sex Roles

What has all this to do with women getting into leadership positions when it has been shown repeatedly that women are discriminated against by men who are the leaders? Although the discrimination by men cannot be denied, with Title IX regulations of the Education Amendments of 1972, we have moved into a new era. It is time we women look seriously at our own attitudes and see how we discriminate against ourselves. As a result of our early socialization, we have become as insensitive as men to the ways in which we behave and the roles we play. We teach our young girls that it is unfeminine to do as well as boys in a variety of activities such as learning mathematics, aspiring to be a dentist instead of a dental hygienist, and asserting themselves and their ideas. How many of you learned to present an idea so that the boy or man with whom you were working or dealing would believe that it was his idea? Why can't you take credit for it? Did you learn you had to protect a man's ego in order to be considered feminine? If we didn't expect men to be something more than they really are, maybe we wouldn't have to worry so much about their having such tender egos. Wouldn't it be refreshing to be able to be more honest with both men and women and not have unrealistic expectations of them? The ideal would be expect them both to do their very best with their own special talents, whatever they are.

In spite of the traditional rearing of children according to rather specific sex roles, some studies show that not all human beings react as expected. Maccoby[2] reported that various studies of men and boys and women and girls who scored high on general intelligence, analytic thinking and creativity showed that they tended to "share more of the interests and activities normally characteristic of the opposite sex." Maslow[3] was also concerned with cross-sex interests and feelings. As a result of his clinical-experimental research on dominance-feeling and social behavior in women, he suggested that it would be better, when speaking of inner personality, to describe high dominance men and women as masculine and low dominance men and women as feminine or to drop the terms altogether because they were too misleading. He found that "from a psychological view, a high dominance woman is more like a high dominance man than she is like a low dominance woman." High dominance women, according to Maslow, have many of the qualities which are considered masculine in our culture, such as strong social purpose, strength of character, leadership, liberation from trivialities along with lack of fear, shyness and feelings of inferiority.

In an effort to overcome the prevalent, simplistic dichotomizing of sex roles, Senders and Gampel[4], in their discussion of 'male values' and 'female values,' recommended that higher education transmit both sets of values to students so that members of each sex may learn "to accept that within themselves which has been traditionally assigned to the other."

Our problem, it seems, is how men and women together can bring about an evolution in sex roles which will work to the advantage of both sexes and society as a whole.

Women Leaders

In 1972 I completed a study on women in the top three levels of administration in California community colleges (Pfiffner)[5]. After checking the 92 existing colleges and eliminating positions which were sex-stereotyped such as Dean of Women and Dean of Men, I found there were 26 women and 605 men in these jobs. This amounted to 4% women. For comparison, 11% of the Boards of Trustees members were women and 28% of the teaching faculty were women. Four years later, I updated the statistics and found that there were 103 colleges with 55 women and 660 men in the major administrative positions — an increase of 4% for the women to 8%. The women on Boards of Trustees increased by 3% to a total of 14%. So change is occurring even if slowly. Data on four-year colleges nationally show that the number of women administrators at major state universities is steadily increasing. In the past two years large numbers of women have moved into low-management positions. This is encouraging because a larger pool of women is developing from which to select women for higher level positions as they gain experience and self-confidence.

Characteristics of Women Administrators

Returning to the 1972 study, I personally interviewed 22 of the 26 women and discovered that the personal characteristics they felt were necessary to be an administrator are: Ability to work with others, strong personal value system, fairness and objectivity, sensitivity for people, sense of humor and humility, flexibility, good health and high energy level, openness, ability to organize, and knowledge of job. They believed that a woman who is aspiring to administrative work should learn to know herself and be herself, should gain a broad educational background with a variety of experiences, should be patient and gentle, should be objective, and should be aware that top-level administrative work is stimulating, creative and rewarding.

Special Concerns

There are some special concerns with which women more than men have to deal. One of these is fear of success as described by Horner[6] — fear which usually afflicts bright, educated women of middle-class professional parents. Some women experience deep-seated conflict between their own desire for achievement and the social values and stereotypes which cause the 'femininity' of such desires to be questioned. Another area of concern which achievement-oriented women have relates to the guilt they feel about leaving their homes and families to seek outside work. In order to assuage these feelings they think they have to personally keep their homes neat and clean. To be an effective leader, you just don't have time to take care of all of the details to which you may be accustomed. As an example, no professional woman should be baking her own bread or cleaning her home unless she really enjoys these tasks as leisure time activities. You have to learn to use your energy wisely and to delegate jobs that others can do just as well as or maybe better than you. How many men administrators rush home to scrub the floors and do the ironing? You can get back to these activities when you retire from your profession.

Developing Women Leaders

Women are fully capable of working in leadership roles and making important contributions in non-traditional areas, but they have to learn this and accept it on both a rational basis and an emotional basis. Men also have to learn this about women on both bases. It will take planning and action by all of us in the best ways we know to help develop women leaders in higher education. Some ideas which you might incorporate in your plans are to:

1. Consider seriously your own attitudes toward roles you have learned to play and how this influences what you teach young people.
2. Encourage your students to get as much education and experience as possible so they will be able to compete with men for the top-level jobs.
3. Encourage women peers who have the talent and interest to prepare for administrative work.
4. Help each other develop communication lines with higher education administrators in your institution in order to learn about the power structure and how it operates.

5. See to it that every announcement for an administrative opening at your institution is sent to the many professional groups of women for circulation through their newsletters.

6. Remember to check on your own talents and interests to see if you're a likely candidate for an administrative position. It is not unusual for a woman to expect that someone else, whether it be a man or woman, is better for a leadership role than she.

7. Let people in the administrative segment know that you're interested in becoming a part of it. Join administrative organizations. Find a sympathetic man to whom you can look for advice and moral support.

8. Check at your own college on the Title IX Self-Evaluation Report (which must be completed by July 1976) to see what changes are anticipated and what influence you may have in bringing about change in opportunities for women. As you know, revisions related to physical education facilities and curricula should be a large part of the report.

Conclusion

I have tried to get you to look at some present attitudes toward sex-role development and some changes that need to be made before any great numbers of women will be able to move into important leadership positions. It is my strong conviction that having men and women leaders working together to develop the fine potential talent in our society will result in a stronger society and one with a renewed vigor which we seem to need on the celebration of our 200th birthday. I would like to close with a statement by James Thurber, "Let us not look back in anger or forward in fear, but around in awareness."

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DUE TO CIRCUMSTANCES BEYOND OUR CONTROL... THE UNCERTAIN FUTURE OF PHYSICAL EDUCATION

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Almost everyone in higher education must be aware of the difficulties that face most campuses in this decade. These critical issues have been reported in the press, analyzed in the journals and have been the subject of faculty discussions in academic senates and in professional societies such as this one. But little has been done to adjust to the no-growth reality of the 1970's, to the budget crunch, to the continuing over-production of bachelor's degrees and doctorates. Little has been done about the erosion of standards and nothing has been done about the job gap for graduates at all levels. We say that these are circumstances beyond our control — but are they?

Let me review for you some of my observations, from my point of view, on some of these related and important matters. The great problem facing higher education over the next 20 years is the high probability of declining enrollments. The golden age of higher education came to an abrupt end in this decade when the twenty-five year boom in the college job market almost hit bottom. For the first time, new bachelor's graduates had difficulty in finding jobs — and those who did find jobs were frequently under-employed — or by implication over-educated specialized professionals. There simply are not enough good jobs to go around to everyone, who because of educational attainment, is led to expect that he or she deserves placement at a "professional" level. We all know that education has frequently been sold as a ticket to a better job. Life-time earning expectancies of college graduates have been compared with those of high school graduates in efforts to motivate the young to continue their educations. It now appears that education is not paying off as it was supposed to do.

By all relevant measures, the economic status of college graduates is deteriorating. This is a potentially serious social and political and economic problem facing higher education. We have seen many state and federal policies implemented which are designed to upgrade workforces educationally — many involving support to minority and poor youth — these policies are now creating frustration and low morale of the unemployed and under-employed younger workers who now, because of their educational attainments, are able to effectively articulate their dissatisfactions.

This disappointed generation could further withdraw its support from education — at all levels. Middle class workers do not often approve school bonds even now. We might expect that educational institutions and programs, at all levels, may be under general attack from our disappointed former students.

Certainly every indication I have is that employment prospects for the young prepared in physical education are declining sharply. And, at the same time, data gathered from the College Entrance Examination Board, from students who took the Scholastic Aptitude Test, shows that nearly 2% of over 600,000 students said their intended major field of study in college was to be physical education. That figure represents nearly 12,000 students. How is it that we can continue to prepare thousands of majors in "professional programs" and not recognize or do anything about the growing problem of the job market?

The number of physical education undergraduate majors in California alone is staggering. Our California State University and Colleges system graduated nearly 1500 men and women physical education majors last year and that many again this spring. Add to these numbers the many other institutions in our state in which there are major programs and the problem becomes alarming. All the more so at this time when physical education, having been the most required subject in the California public schools since World War I, has now been eliminated as a requirement for the last two years of high school. The demand for teachers is surely likely to go down. The expenditure of effort to prepare professionals, most of whom will be mis-educated or under-employed, seems wasteful. The expenditure of resources, already in short supply, to maintain professional programs society seems not to need becomes most difficult to justify.

The surplus of physical education graduates is not unique to California. National figures show that over 100,000 fully prepared teachers have been in over-supply during each of the past several years. About half of these surplus teachers were secondary teachers and among the surplus areas most prominent was physical education along with social studies and language arts.

It is time now, as never before, in undergraduate programs for cut-backs, greater selectivity, higher standards, better guidance and higher quality. Why is it that this does not take place? What forces prevent a profession from better controlling its continuing supply of professionally prepared practitioners? I am afraid that the answers to these questions are to be found in the self-interests of the professors whose livelihood and academic interests can only be sustained by a continuing parade of students passing through their departments. The fact that they are *there* is important — not what they will be able to *do* with the education they receive.

Now let me comment for a minute about the overproduction of doctorates. Again, during the golden years before 1970, graduate education in all fields, and certainly including physical education, grew explosively. Enrollment was up 400% in that 25-year period. Institutions granting the doctorate doubled to nearly 300 and the number is still growing. The number of doctorates produced in the period was up 700%. Now, as we all know, the Ph.D. surplus has hit the headlines. About 35,000 doctorates were awarded last year, more than 45,000 are estimated for 1980. As programs are expanded and as opportunities for placement are lessened with the bachelor's or master's degree, more people are going to school longer. Higher education is producing nearly a half-million doctorate holders who are, or will be, looking for jobs over the decade between 1970 and 1980. I attended the AAHPER meeting in Milwaukee this spring. (We had two positions to fill in our Health Science Department and we arranged to interview some candidates there.) I was shocked by the "slave market" atmosphere of the "placement" area. There was an acre of small tables at which interviewers could arrange to talk with countless anxious applicants. Only the very best could enjoy the option of choosing positions for reasons of professional challenge or geography. Many were to join the disappointed generation. To me it was a depressing experience.

Our established graduate programs are carried on with so much momentum. It would seem reasonable to phase down or phase out some — but that will not happen, unless by external forces. Instead, some of you are at universities that are even now proposing new doctoral programs. These cannot be needed. Thousands of Ph.D.'s and Ed.D.'s are without jobs in their areas of specialization; those who have jobs have become mean-spirited in their efforts to protect their positions. Except for outstanding and productive scholars, some women and minority members whose market value is high these days, academic mobility in tenure track positions is almost at a standstill. Again, in the promotion of doctoral programs, we have the self-interests of so many professors whose jobs and academic interests are involved. This, I believe, helps to create and maintain the momentum. The system just goes on. Thousands of hard-working students are on their way to doctorates encouraged by

graduate departments responsive to their own inner dynamics rather than to the requirements of society or the real needs of most of their students. With the dwindling job market, what justification can possibly be made for not curtailing expensive graduate programs — especially when resources are needed elsewhere?

Due to circumstances beyond our control budget makers are looking at ways to make higher education more efficient. Our governor tells us to "lower our expectations." Governor Reagan, before him, already *had* lowered our expectations. Throughout the nation it is clear that this is a time of retrenchment. Resources must be conserved. The people who control resources are looking for ways to make cuts, to look for cost effectiveness, increased productivity, and to analyze budgets and programs. Everyone here should be acutely aware of these problems. They have touched all of you I am sure.

You should be concerned about physical education's vulnerability during this time of retrenchment. You are identified closely with athletics. In a recent survey reported in *The Chronicle of Higher Education* faculty were asked the question, "When colleges retrench, where should cutbacks come?" The overwhelming response of 73% was to first cut funds for athletics. Cutting or holding the line on sports budgets does not seem possible while at the same time worthy athletic programs for women are escalating at considerable expense. Something has to give. I suspect in many cases the budgetary adjustments will be made *within* physical education programs rather than through budgetary augmentations. Fiscal restraint is one of the grim realities of the time for public and private education. Physical education must learn to "make do with less" as well. Why is it that governors and legislatures and boards of trustees are pushing austere budgets? How has the tide turned so rapidly in the past few years? The answer is simply that the cost of educating is up. It is up 42% in the past 10 years in constant dollars after adjustments for inflation and enrollment increases. That is, a 42% increase per full-time equivalent student. Add to this increasing cost the enrollment slowdown and you have the problems of retrenchment, ways and means, values and priorities. It has been suggested that we plan or perish.

In attempting to further chronicle change in education, I would now like to comment briefly on an absolutely essential component: that is, the faculty as scholars and as teachers and members of the academic community. It is obvious that in the era of no-growth those faculty who were schooled in the 1960's will dominate faculties for decades. It is a great handicap for a declining industry to have a rising age of the workforce. It is upon the morale and commitment and skill of this group that, in large measure, the future of programs in higher education depend. In this time of retrenchment, hundreds of institutions have initiated programs of "faculty development." At last count, this movement had touched over 400 campuses. Foundations have redirected their grants to support such programs. These are efforts, for the most part, at re-invigorating the tenured faculty in the area of teaching effectiveness. We know that many of our most experienced teachers are the least effective. They are not leading, they are not productive, they resist change, they have no effective alternative teaching strategies to the lecture method. They turn students off. They are not good models for the younger faculty. They frustrate and lower the morale of the younger faculty. I am sure that this problem is widespread throughout departments across the nation. At the same time that we have an oversupply of qualified practitioners who are waiting in the reserve army of the underemployed, we have too many examples of the slothful pampered professorate. The fact that students are often hard to reach, are silent or sullen may be in part due to the programs and people who are trying to reach them. It is clear that the making of the professor should not be the role of the graduate school alone. Universities and the professions are coming to recognize a continuing responsibility to, in some way, provide teaching consultation services. How best to do this is not yet known but it is a vital concern.

By no means am I suggesting that there is wholesale ineffectiveness. I recognize that there is inevitable imperfection but there is also some malpractice. And we should have insurance against that.

Recent surveys show that nearly all professors are satisfied with their choice of an academic career which, as with any profession, has its rewards and frustrations. Considering physical education professors, I am struck by one fact. They continue to exhibit an academic inferiority complex in their relationships with their colleagues in other disciplines. They seem not to be comfortable as fully functioning members of the academic community. They are quick to describe their teaching specialties as kinesiologist or exercise

physiologist if they have those specialties. The self-perception of physical education departments as having lower status in the academic pecking order may not be accurate — but it is there. Physical educators must "go public" on campuses, attitudes must be changed, some charismatic leadership would help. Deans and directors and department chairs and faculty leaders in physical education must go beyond the role of peace-keepers and caretakers and crisis managers if the interests of physical education are to be properly represented in the future.

The controversy over teaching versus research is too well known to require discussion here — but the renewed concern for and emphasis on effective teaching, how to evaluate it and how to properly reward it is a development of this decade. In the past, research and scholarly productivity were the sure way to tenure and advancement. Now many disciplines are reevaluating their expectancies in the area of scholarly productivity. Consider the Modern Language Association with 35,000 members. Publication in learned journals for these professors is very difficult — almost impossible — and other professions such as yours present your professors with similar difficulties. How much scholarly productivity can we really expect? It has been reported that in all fields rather little substantial research is produced beyond the doctoral dissertation — and scholarly productivity in most cases stops altogether once the full professor level is reached. Again we often see the senior professor as an imperfect model for younger faculty who are trying to make it in academe.

As we chronicle change in higher education, we must recognize that academic unionism has emerged as a growing force during this decade. Given the probability that austerity will continue to affect higher education and thus focus attention on economic concerns, unionization may be expected to grow. Now over 100,000 faculty members in higher education are represented by collective bargaining agents. During this past academic year, faculty unions were added at 60 campuses. It is obvious that there is a steady growth in the number of faculty members who favor collective bargaining. The growth of faculty unionism in an era of austerity promises to be the source of the most important campus conflicts of the next decade. The relationship between academic status and attitudes toward unionization indicates the effect of "class status" among faculty members. Those in the lower ranks, the younger, the untenured, those with higher teaching loads in institutions with less prestige understandably tend to favor unionization — they have the most to gain and, conversely, to lose. Unionized faculties *have* gained in salary increases, lower-paid ranks have benefited most.

My concern, as an administrator, is that faculty unionization has increased the sense of an adversary relationship between the faculty and the administration, as well as between the faculty union and students. Student leaders almost uniformly consider faculty unionism a threat. They would like to have increased influence on tenure and promotion. I see the movement as surely creating more bureaucracy. Collective bargaining does change the role and image of the groups within the academic community. Obviously there are benefits if salaries can be increased and faculty can have protection against arbitrary administrative action.

I am sure this movement will have profound effects on higher education. When something has to give, high cost programs are most vulnerable. Physical education and athletic programs are high cost.

Reports of the ever widening scholarly efforts of physical educators who are on the cutting edge of the field are not the best statements for the field. You need spokespersons who are articulate generalists. Applications of biochemistry, Eastern philosophies and religions, different ways of looking at human movement experiences, reliance on new psychologies to describe experiential phenomena of human movement in sport and dance — all of these are useful in the discipline but not in the larger academic community. Your scholars are speaking the most advanced language of the discipline but it is frequently not understood by professionals in your field and even less understood by those upon whom we depend for support — the decision-makers and budget-makers.

I expressed this concern at the 1973 Western Society Men's meeting in Reno. I had seen a position paper of that group that concluded, "The purpose of physical education in 1980 should be to study the effect of movement on man and the effect of man's movement on society." I told that assembly and I will repeat what I said there. "That is a hard line to sell! I don't think it is what you do. Academic planners do not know what you mean. We still have not learned to talk to or understand each other. How can we expect those outside our

discipline to do so?"

I want you to know that I continue to think that physical education is among the most important enterprises at all levels of education. It is important and I am personally convinced that no discipline holds more challenge, promise and genuine opportunity for service to students and society than does physical education. But these values have to be effectively communicated by those who know to those who will make the decisions in this period of no-growth reality. The future of physical education may largely depend on how well this is done.

From what I have said before, one could conclude that physical education is in a precarious state in higher education. Perhaps it is. Facing the new realities of the times, physical education does have an uncertain future. The continuation of programs as we have known them is neither inevitable nor necessarily rational. And the mood of the future will be largely shaped due to circumstances beyond our control...

THE PROFESSION IN TRANSFORMATION

Preparing For Entry Into Century Three

THE AUDACITY TO GO TO THE LIMIT OF OUR DREAMS

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(This presentation was introduced with scenic slides accompanied by a recording of "Time and Love" by Jackie Cain and Roy Kral. It was concluded by slides to the recorded accompaniment of "Soft", by Chuck Magione and Esther Satterfield.)

"Don't you know, tomorrow anything can happen
All that really matters is time and love"

Thanks for letting me share my old jazz friend with you. Let me also acknowledge four other friends who have greatly influenced me and whose ideas are identified in my laundry list: *Dorothy Hanson*, who has a fondness for me, for fitness, and for the sensuous life; *Ken Lersten*, my colleague who constantly inspires me and builds up my hope; *Ken Fletcher*, my former college roommate who, as a counseling psychologist, embodies all those loving things he extols others to be; and *Dick Elliott*, my campus chaplain whose theology and philosophy has helped to keep me using my energy in positive ways when it would have been easier to do otherwise.

Transformation is a heavy idea. It connotes more than changing this and modifying that. It involves making something new out of that substance which was the old. Contingencies and encumberances will need to be withdrawn. Physical education and physical educators will need to be set free so as to transform.

The professional transformation of physical education is my topic. Are we really serious about transforming physical education? Do we intend to intellectualize this transformation or are we committed to doing the real thing? Intellectual talk about transformation is cool...but actually doing it will be painful and risky. How courageous are we? How much

pain are we willing to endure? How much are we willing to risk? How much energy and resources are we willing to commit? Will we be able to live life as a daring adventure? That is the requirement. Transformation is an "all or none" phenomenon. Once we start, we must see it to a positive conclusion.

Evolution will not be enough. Evolution is too slow and too unaware. Transformation demands some form of positive revolution. Revolution is fast and effective but has the danger of a political "we win-you lose" proposition and is often imposed and controlled from the outside. Revolution can be "an act now with what values you have", or a "no time to take the valuables for the house is burning". However, we need some revolution to make transformation occur. Perhaps our transformation should be more of a controlled metamorphosis where from the process something beautiful emerges, like the transformation that occurs when a cocoon becomes a butterfly. Controlled metamorphosis takes more time than revolution but is certainly faster than evolution. Transformation should be a self-induced, deliberately planned, humanistically oriented re-*valuation*.

Physical education has an incredible potential. We have not yet dreamed those dreams which will capture its essence. We are just getting started. As professionals, we are obligated to promote physical education in ways which will optimize its contributions to mankind. We cannot settle for less. Our commitment must be for transformation.

First, I want to suggest that we place a moritorium on what I will call, for the lack of a better term, our professional activities or the business-as-usual types of things. We need to stop our world as best we can so that we can go about the task of being and becoming. Our usual professional activities are no longer highly productive and will only get in our way. We need to find the time to dream, to create, to think and to transcend if we are to become transformers.

Then our top priority must be to develop a vision for physical education. If we are to be and to become, we must know what it is that we are to be and what it is that we can become. We need to dream those dreams which we have not yet dreamed. Our vision must be free and prophetic in its quest for what is possible. The development of a vision is profound creativity and it cannot be performed by minds that are pinned down and tethered to process. Our visionaries must have the ability to transcend and go beyond — to give birth to newness. Man possesses the unique capacity to transcend, to relativize, to go beyond and to stand above. We must do it.

Visions

An old man dreams and cries
His face a ruddy witness
His eyes reddened stillness
His mind sensing lies and
Feelings beyond imagining
For you, for me, for fullness
Almost a madness.
A young man faces squarely,
Stonily at his life
He professes arrogantly
He teaches knowingly
He watches eyelessly
As both present and future
Fold and unfold, creep and crawl
Rise and dance or fall.
Visions elude him
Dreams encircle him and move on
He is never close to life's rim
Frontiering or cheering the future
As it slides into place on
Temporal feet.

The old often see visions too late
The young never see enough to rate
The present circumstance
Life by accident and happenstance
Professional by profession
Person by years.

– *Ken Lersten*

In all civilized societies of thinking and reasoning persons, ultimate truths or values are held. These tenents are clearly understood and are basic. They stand the test of time. They remain firm and stable. Even in the midst of change when people modify their behavior to meet new needs, their changes are consistent with a continued focus on their basic tenents. Such tenents are always there to give direction and guide development. But in physical education (and in general education for that matter), there are no basic tenents which satisfy the above description. We dó not have a clear vision of who we are and what we can become. What we have instead is a highly developed process. Our process has become an end; it serves to give us identity. We continue to defend and legitimize our process by addressing it to a variety of goals which society endorses. Our goals change, but not our process. If physical education is to have a viable future, it must develop a vision to guide process so that meaning can be defined and translated into action. The essences and basic tenents that are held up to be valued by physical education form its vision. A vision will give physical education a hope. It will be meaning making. It will provide for renewal and transformation.

The future is open and we shall spend the rest of our lives there. We must construct that future with our vision and process in dialogue. I would suggest using an alternative futures approach which will force us to identify our possibles, probables and preferables.

The possibles are a pie in the sky approach. Expansive dreams are developed from the universe of possibilities. There are no restrictions on dreaming. Dreams do not have to pass the critical criteria test. Almost anything is considered. Extreme creativity is sought. Illusions of grandeur are needed. We must dare to be great. We need the audacity to go to the limits of our dreams. For example, let's dream to create a symphony with human movement. Why not! or better yet, let's dream about winning a Nobel prize. No limits. No small thinking. Phrases such as "it wón't work", "we've tried that before", and "we cannot do that because" will need to be condemned.

But who will be our visionaries? Colin Wilson has written an important book about such people. He wrote:

> "The visionary is inevitably an outsider and this is not because visionaries are a relatively small minority in proportion to the rest of the community; in that case rat-catchers and steeple jacks would be outsiders too. It is for the very different reason that he starts from a point that everybody can understand and very soon soars beyond the general understanding. He starts from the appetite for fruitful activity and a high quality of life."[1]

I hope that we have not socialized out of physical education those persons whom we consider to be outsiders. We need their visions. I want some of our visionaries to be persons who are liberated and who are liberal, who have been inspired by greatness such as the likeness of Beethoven, Einstein, Rembrandt, Christ, Bronowski, Jefferson and Ghandi; who have revolutionary tendencies but who have an appreciation for evolution. These must be persons who can transcend and go beyond, who have invested themselves in being and becoming, who are open and who have a strong sense of humor about themselves and physical education. I want them to be people who are willing to risk, who are idealists, who can work together cooperatively, symbiotically and synergistically, who have courage, who are faithful to humanistic values and who foster the spirit of play. They must be persuasive so that they can take us along on the journey so that it can become our own. Our visionaries must represent a plurality of dreams for physical education. But a reduction to the common denominator must not occur. We cannot afford to be reduced at all.

Once we are satisfied that we have an exciting, fantastic and exhaustive list of possibles, we can begin work on selecting the probables. Our task will be to attach reality to our dreams. This must not be done harshly but with insight, awareness and sensitivity. Then

having accomplished this we will be ready to develop a list of our preferables. This may be the most difficult task of all, because we will have to carefully attach our values to our dreams. Our list of preferables will represent physical education's mission, having been both reality tested and value tested.

Since I have those of you who are awake as a captive audience, I want to influence you toward my vision for physical education. Why don't we decide to focus upon developing whole persons out of fragmented persons? Whole persons are those who possess a never ending capacity for growth behaving with freedom, openness and spontaneity, and who are persons possessing a never ending capacity for play behaving with a sense of humor and a capacity for self-transcendence. My assumptions are that each person is unity and cannot be legitimately broken down into parts. I also assume that no person is an island; that one becomes a whole person in community, in loving relationships with others and that the new being of personhood is engendered by a reversal of the relationship between doing and being. Physical education must concentrate on offering those which develop wholeness and eliminate those practices and attitudes which cause fragmentation.

Let me now turn to my persuasion for the transformation of our profession. Our task can be stated simply: *to transform lay behavior into professional behavior*. Easier said than done. I wish we knew what the parameters were...and how to best affect them.

Generally, lay persons do not go up to physicians who are professionally diagnosing a physical impairment or go up to lawyers who are writing the basics of corporate law, and say, "OK! — I'll handle that". They would not feel competent or comfortable to do so. But they do not hesitate to pretend that they are physical educators — "they handle that" in physical education all the time...and we let them. Certainly there are skills and competencies which make a difference, those which are needed to transform lay behavior to professional behavior. We need to check out what they are and how to successfully influence our students so that they may possess them.

We need to conduct research about professional transformation. But we cannot afford to wait until all the data are in to get started. I am willing to trust our feelings when we employ useful approaches. One approach which I am about to suggest has been borrowed from Larry Locke; however, my suggestions about its use may differ from his. We've never discussed it. The approach uses three parts: first, to decide what it is that we value in adults; secondly, to decide what characteristics we want to see developed in children as a consequence of their experiences in physical education; and thirdly, what should the physical educator be like. I have worked my way through this process with undergraduate and graduate majors several times. The emphases which have been developed by these students would indeed transform physical education. Let me briefly discuss each category.

What is it that we value in adults? Let me call your attention to the recent issue of *Daedalus*, spring, 1976. The entire issue is devoted to a discussion of adulthood. The notion which I get from my study of this issue is that adulthood were outlined earlier. Briefly they are all about becoming a whole person who is capable of continued growth and spontaneity and who is a person who appreciates play. William Bausma writes about adulthood and play:[2]

> "This may be related to Paul's (disciple of Christ) contrast between the wisdom of the world and the divine foolishness with which its hollowness is revealed". He also says, "To play is to relax. To enjoy playfully (which also means to delight in, for itself, not to exploit instrumentally, for himself) the goodness of creation. Our culture can be an unbounded playground for free and joyous activity. We can risk the little adventures on which play depends. The loving human relationships can find expression in mutual play, through which we give pleasure to one another. Play is a natural expression of joy of faith which makes it possible to engage in life, even the hard work of life as a game that has its own seriousness (for without their special kind of seriousness, games could scarcely interest us)."

Other values are important too. Please develop your own list.

Next, what characteristics do we want to see developed in children as a consequence of their experiences in physical education? Obviously, by my comments above, these characteristics should lead to a personal wholeness and an adulthood. I would underline the importance for feeling success and achievement, for developing a positive self concept as a

moving being, for developing the capacity to enjoy movement and to experience joy from moving, for developing an awareness of their moving self, for developing skills, competencies and fitnesses and for developing a capacity to play. Other characteristics are important too.

Lastly, what should physical educators be like? God-like, of course, if they are to satisfy the above. They must be persons whose behavior has been transformed from lay to professional. Persons who model the behaviors we value in adults and who also model those characteristics we want to see developed in children as a consequence of their experiences in physical education. Your list will be more useful than mine.

The professional program of physical education needs a strong theory base. Much of our present scholarship is based upon common sense and we rely too heavily on slogans and magic. We need to do research and to take the responsibility for the implications of our findings. Much of what we now do is not research, it is experimentation. Our experimentation is neither theoretical nor practical, it is immune to both theory and practice. It is neutral, it just sits there. We must develop a climate where knowledge can flourish. I suggest the use of research and development teams and the joining of college-university professionals with public school professionals. Hopefully a network can be built which will tie it all together.

Physical education should take its research seriously. Theory must influence our practice. Nothing less is justifiable. Physical educators must become students of physical education as well as students of teaching. The gap between theory and practice has become so large that it resembles a canyon. When you get in it you can hear echoes from both sides. The only connections seem to be swinging vines and flimsy bridges like those used in the old Tarzan movies. We need more than vines to swing on and flimsy bridges to walk; we need to fill in the canyons, to intimately unite theory and practice.

Our students need to be liberally educated, to be inspired by greatness, to have their horizons expanded, and to be more fully actualized. Interdisciplinary study will help. I urge physical education to foster the spirit of the Renaissance person. For us to become intimate with the aesthetic and sensuous nature of movement would be fantastic. Let us explore ways to integrate physical education with the arts. What an incredibly rich resource the arts can be for physical educators. For many of us this would heighten the excitement and joy in our own movement. Think of what would happen if we were able to share our sensuous selves with our students. Let's let that beautiful butterfly that is in each of us show itself to our students and to our colleagues...better yet, let's expose it to the whole world.

Let's find ways to strengthen our ties with dance. Perhaps humanistic body-mind integration approaches such as bioenergetics will be helpful. When we lose our intimacy with dance, we lose too much of what is valuable about ourselves. I know that many dance programs have pulled out of physical education. However, I do not believe that the problem is the one that is often stated...that physical education has lost administrative control of dance. The problem is, instead, as I see it, that we have lost dance's influence on us. Why don't we try to get back our movement dialogue with dance? We need this enrichment.

Physical education should emphasize moral education. We have a leadership responsibility in human valuing, especially about such ideals as honesty, sportsmanship, human worth and human dignity. Individually and collectively we need to take stands which will act out our values. Society can use our moral leadership.

Physical education needs a lifespan view instead of concentrating on just the schooling years. We should emphasize the preschool years as well as those years represented by the latter one-third of the life span. Opportunities to be of greater service to mankind are optimized by a lifespan view.

Physical education is science oriented and thereby is quite analytical in its processes. I would urge us to deliberately engage science in dialogue with the humanities. Wholeness is not adequately measured by science, because science demands precision. Such a demand tends to oversimplify and eludes much of the relevant data of personhood and wholeness. I do not advocate reducing our scientific thrust. I am proud of our scientific work and fully support its continuance. My pitch is to integrate our scientific understanding with the humanities in order to seek wholeness; in order to seek significance from varying points of view. All the significances of man cannot be tested statistically; many of them need to be tested by our feelings and our ability to reason. Both approaches are valid and both need our confidence and support.

The human pool from which physical education draws its talent must be enriched. I urge

us to actively recruit loving, alive, excited, bright, well-rounded students to physical education. The anticipatory socialization signals which we flash to prospective physical educators are too restrictive and incomplete. In order to attract new people to physical education who are whole persons capable of touching the lives of others, we need to find better ways to tell our story.

I will comment only briefly about athletics and competition. Professional work in physical education and in athletics has little in common. Both are important but should be freed from each other so that each can be and become. When they are joined, too many contingencies and encumberances are imposed. Physical education is "transformation oriented, while athletics has no such visible commitment. The athletic model is strong; it is set in concrete. If our women have dreamed a better athletic dream for their athletes they have not acted out their dreams in ways that would lead me to see a transformation. Physical education will find transformation impossible if athletics must be an essential part of our substance. No one is likely to transform athletics.

Competition is a valuable tool which needs to be continued as a part of physical education's bag of goodies. But competition is often overvalued and inappropriately used. If it is applied to develop the wholeness of persons, I fully support it. If it is used to cause fragmentation, I take exception to it. It is important for us to find ways to use competition so that it does not interfere with the communication between man and his world or with man's existential moments of cooperation, friendship and love.

In any event, I would urge us to educationally look at competition a little differently than most of us have in the past. Why not educate students for the most predictable outcome of competition — losing? Since 80-90 percent of us are losers, shouldn't we be educated for the losing experience? Take good old Charlie Brown. Each fall Charlie rushes to kick the football while Lucy patiently and competently holds it in the proper kicking position. Each year Lucy promptly pulls the ball away at that precise moment when Charlie's foot is delivered. Each year Charlie kicks the air. Charlie is a loser like most of us in this society where competition has become a primary value. Some education for losing would be helpful.

If we teach competition, let's teach competition which means competence without arrogance, winning without cruelty, integrity without indifference, losing without loss of self-esteem. Competition is exciting as long as it is not fragmenting and destructive.

We must find ways to positively influence the professional socialization processes of physical education. The norms which are demanded by that socialization process dampen creativity and reward conformity. For those physical educators who are already in the profession, we must explore ways to provide for renewal. Confrontation with professional colleagues is desirable. The depth of professional relationships may be measured by our ability to confront and challenge; yet stay with the relationship and grow.

I just found a new book by Albert Cullum dedicated to all the grownups who as children died in the arms of compulsory education. The title is *The Geranium on the Window Sill Just Died, But Teacher You Went Right On*. Isn't that a marvelous title? It helped to influence me to make my main plea for physical education to increase its affective influences. I would like for physical educators to be regarded as those persons who are the "great lovers" in our society. Let's develop an affection with our students. If we miss this opportunity, I am afraid that we will miss the whole point of what it is we can be and become. My friend, Ken Fletcher, calls me a secular priest ...is that a compliment?

Affective education is difficult for me to define. It is not being permissive, loose, "one of the kids", or patronizing. But I am not always sure what it is. It includes being real, firm, strong, gutsy, challenging, caring, warm, accepting, listening, confronting, forgiving (self and others), and being responsible to self and related needs. It is to challenge and yet yield, to be constant but not to hold on, to be faithful but not unyielding, to be honest but not cruel, to work hard for self but not at the expense of others. It is not to be afraid of polarities. It is to let people know where you stand and for what you stand. The curriculum should include life long skills and attitudes as well as ways to focus, to solve problems, to relax, to move more freely, to dance with special concepts, to play, to cooperate, to compete, to compete to enjoy, to excel for itself, to become sensuous, and to enjoy living. To become whole!!

Humanness begets humanness or hostility. A person who relates humanly will receive anger and put downs. Without security and support a person acting humanly will be hurt. With support and a strong sense of self, a person can continue. Affect is not rewarded or

acknowledged in this society. Coolness is. Courage is rare. Role revoking is difficult.

When working with students, affect means first trusting yourself and then the students so that they will trust you; sharing with students so that they will share with you; being vulnerable with students so that they will be vulnerable with you; enthusiasm is the outcome of encouragement, realness is the outcome of acceptance, phoniness is the outcome of protection. Let's not let our geranium on the window sill die; let's nourish it. Life can change. Education can change. Physical education can be transformed. Will and courage, time and love can be the basic ingredients. Hating deadness may be enough. Wholeness is enough to want for yourself and others.

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1. Colin Wilson
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READY OR NOT
ONE
TWO
THREE

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When I was a kid, we used to play a game called "Red Light" where the person who was IT would hide her eyes and count as rapidly as possible, "One, two, three, four, five, six, seven, eight, nine, ten — RED LIGHT!" The rest of the players would be inching forward attempting to tag IT before the words RED LIGHT were reached. Once IT called out RED LIGHT, you were allowed to swing around and accuse all of those whom you saw moving and send them back to the starting line. Counting the time was important in lots of games when you were a kid. We'd cover our eyes and count up to a hundred in hide and seek and then scream "Here I come, ready or not". We'd make up games where everyone started from zero and whoever got the most points would win the game. We always counted up — from nothing to something.

Several years ago, two of my colleagues, Marie Riley and Kate Barrett, were working with elementary school children in concocting game forms. They had all sorts of patterns with which they were working as the children made up their own games. Marie and Kate were able to observe many things in the patterns that the children used as they invented games, but the concept that intrigued me most was that the children all counted time backwards. When they played their made-up version of "Red light", they counted "ten, nine, eight, seven, six, five, four, three, two, one — RED LIGHT". They counted backwards for Hide and Seek — all the way from a hundred at times; and when they

invented games, the players always started with a score and as points were earned, something was taken away from that score, so the person reaching zero first usually won. They started with something and the winner ended with nothing.

I have no idea of what has brought about that change, although I once heard Margaret Mead suggest that since the advent of the atomic bomb we are living in a prefigurative culture and it is normal to blast off from a backward count — like the moon shots.

It has worried me that we are a part of a society which feels that it started with something and wants to reach zero. But perhaps that is the real way to effect a new beginning, and as you and I prepare for entry into Century III, it may be hopeful that we are initiating our thrust from point zero. I believe that in Century III we will have to start counting up again.

My abnormal preoccupation with the counting of time and values is not just the rumination of a middle aged college professor about her youth, for it has provided me with an analogy with which to share my thoughts with you regarding our future. If you reject my frame of reference, you will probably be uncomfortable with my prognostications; but if you will entertain that counting up might be tenable, we may have some basis for valid assumptions... or at least interesting predictions.

Let's quickly review what the early one-two-three was all about so as to understand our present three-two-one count. Employing a form of Socratic logic (which has very severe limitations), it could be noted that national security is related to the health of the people, that the health of the people is measured by the strength and endurance of individuals; therefore, strength and endurance sponsor national security. I suspect that it was such logic which sponsored the early gymnastic program in our field and which created that never-to-be-snipped bond between health and physical education.

Continuing with our Socratic paradym, it was noted that sport and games were a test of strength and endurance, that strength and endurance were components of health; therefore, sport and games were healthy. By continuing in the same reasoning pattern, it is easy to understand how sport and games on the fields of Eton helped win the Battle of Waterloo.

In such a design, it was almost inevitable that the sports trainer, the game master and the physician would have to form a team which attended to the nation's security in its broadest sense. The design helped all of us count up as to what gymnastic, sport and games accomplished. Anthropometric change, physical fitness and skill acquisition were easily discerned. We took measurements, constructed tests, and used the win-loss records to ascertain if we were successful in our ventures. Empiricism was our most valid instrument of assessment, and we made all sorts of claims from that experiential base. If you had nothing, physical education would help to develop something — seven cardinal principles worth of something.

But then scientific scrutiny became popular and we gleefully subjected our empirical observations to the harsh method of science — a method which suggested that observation was not an acceptable truth unless it could be replicated time and time again. We began to count down. Anthropometric change was more connected to growth than it was to development; development demanded continued and sustained involvement which necessitated overload; strength was not an absolute and had to be measured in references outside of the myologic patterns we had used; endurance was dependent upon psychological as well as physical components; skill acquisition was specific rather than general; and most disappointing of all, sport and game activity did not insure the attainment of goals set by White House Conferences.

Our count down also reflected the ousting of the medical profession from our field, with the eventual cutting loose of those individuals who suggested that they were health educators rather than physical educators. It must be said, in all fairness, that severance was not a unilateral action. Numbers of medical personnel saw themselves as reactors to pathogens rather than sponsors of health, and many health educators were distressed that gaming results had replaced the gaming process as the essential core of physical education activities.

As we weaned ourselves away from the medics, it was as if we were frightened to be alone, so for awhile we almost delivered ourselves into the hands of the behavioral scientists. The psychologists began to explain to us non-verbal behavior patterns and motor learning models. The sociologists began to tell us about play interaction and the social institution of sport; the psychosociolists began to tell us about motivation, and even the philosophers began to tell us about the meaning of the sport experience. We availed

ourselves of their writings, we sat at their feet in seminars and conventions, and we even asked them to administer us. If was almost as if we had to count down to find that all that we had could be reduced to zero. Now, with the advent of Century-III looming on the temporal horizon, it may be time for blast off and the seriated count which goes up instead of down.

The count which goes up is based upon the presupposition that there is a future, a future that is different from the present, and a future that will insist upon change. That future can be prognosed as one might wish it to be, it can be estimated as it appears the trends suggest it might be, it can be anticipated as fatalism dictates it to be. The idealistic prognosis may be fun and it may purge the professional spirit by suggesting that all wrongs will be righted; the fatalistic anticipation may be easy and it may relieve a delegated Cassandra from all responsibility other than a smug "I told you so." The analysis of trends, forces and issues on the other hand insists upon some discernable patterns which have current acceptance and some sort of direction for the future which will sponsor the sort of estimation suggested.

Clarke has suggested that there are three futures which we must take into account. The first he calls the "budgeted future" which in a sense is already reality because it is the approved change which is programmed for the next few years. The second future is the "conceptual future" which crosses the bridge from the budgeted future and is usually assigned to long range future direction committees. The third future is the "theoretical future" — a future which is not influenced by the refinements and tangents of existing conventions and doctrines — it is a future which starts from "scratch" and it sponsors the building of a bridge back to the conceptual future. The budgeted future is a report, the conceptual future is an estimate, and the theoretical future is a prognostic hope. Let us consider our three futures, then, in terms of the role of physical education, its body of knowledge, its organization and its modes and methods of operation. Let's start counting up.

The role of physical education in the educational system is in a state of flux. For years, indeed eons, the school has tended the mind and only as the body was viewed as the "temple" of the mind and soul was it considered important. The body has been considered as an object edifice, constructed by genetic circumstance, and only functional at the discretion of the mind and soul it housed. In the past, the best that could be done was to "train" the body. However, as function has become a value in and of itself, the individuality of behavior responses is forcing us to consider a new definition of body. We are budgeted now to believe that the body is subject and is the "radical root of reality". Metheny, Elfeldt, Jewett, Barrett and others have helped us realize that teaching/learning must be structured to enhance the experiental facets of being in the body. We are extending our budgeted future to a conceptual future which provides individuals with understandings that are based upon generic movement patterns and utilize ordinative and creative movement patterns to assist with self-realization. Many of those ordinative patterns will come from the traditional forms of sport, dance, aquatic and gymnastic techniques, but others are to come from activities still being formulated. The theoretical future will reinforce the emerging role of physical education as the art and science of human movement. That theoretical future will sponsor extreme curricular change. Courses designed to assist individuals in adaptive procedures will be paramount. Study of the geneses of human movement, the functionality of human movement, non-verbal exponents of behavior and theories of human movement will be woven into the existing matrix of sport skills, dance techniques, gymnastic tactics and aquatic designs.

In the theoretical future, physical education will be severed from health and recreation and there will be the dissolving of traditional disciplinary walls which have isolated learnings. Physical educators will be a part of the tapestry of understanding which will be the design of education in the theoretical future — a design which already has a conceptual base. It is expected that the role of physical education will no longer present a sharp and lucid image which suggests that education by the physical is different or unique — the physical OF education will be an avenue of self actualization and social enrichment. At long last, the theoretical future will actually embrace that tenet of human wholeness to which we have so long subscribed by ideology but not by practice.

The body of knowledge which is physical education has always acted in concert with the role expectations of physical education. Thus, the development of physiological integrity was basic to the education *of* the physical. The understanding of play, and especially play in its patterns of games, sport and athletics, is currently basic to the belief that physical

education is sport, or even more limited, physical education is athletics. The budgeted and conceptual future of movement as the *sine qua non* of physical education is fundamental to our existence. Human movement is central to all experience, and it is this focus which offers the most logical rationale for the body of knowledge which we espouse.

It has been difficult for us to identify our unique body of knowledge. Williams came the closest in bygone years when he suggested that it was "the sum total of man's activities, identified as to purpose and selected as to kind". It was an obtuse definition and one which affords shadows rather than a sharp outline. Recently I was reading some ideas about aesthetics (also an area which has problems with identification) and I took heart upon reading that if all of the art products of the world could be put in a huge barn and all of the civilization of the world allowed to enter and bring out the ten most beautiful things, although the definition of beauty is obtuse and the concept of beauty beyond explanation, it is believed that the majority of the people would select at least five objects alike. Aesthetics is recognized even though it is not explained. So it is with physical education — the movement experiences which are related to that body of knowledge are identifiable, although not to date enunciated.

The budgeted future is sponsoring debate regarding the body of knowledge which is physical education. In the conceptual future, the arguments between movement and sport will be resolved. There will be no winner in the interaction but the divergent points of view will be synthesized. As the more pervasive and more encompassing concept, it would seem that human movement will finally be acknowledged as central to the body of knowledge which is physical education. The sport phenomena will be absorbed gradually by those disciplines whose attention sport has courted. The *practice* of the sport phenomenon will continue to be a part of the physical educator's method of teaching about human movement. As the art and science of human movement becomes more acutely identified with the term physical education, curricular mutations will occur, learning theory regarding motoric input and output will be developed and we will start the recording and analysis of human movement patterns in ways not heretofore envisioned.

Both the budgeted and conceptual future are ready to provide substantial change in the organization of physical education in our country. That change will be influenced in part by the organization of athletics. It is apparent that there must be some resolution of the amateur athletic problem. The budgeted future already promises the intervention of the federal government, and the conceptual future suggests that a new design is in the offing which will bring to athletics some degree of sanity. The future of athletics will sponsor troubling times for those of us who are identified with that process. The theoretical future of athletics is still a foggy, misted scene. Most educators hope that the pervasive good of sport will prevail and bring to the athletic establishment an aura which will return the Christian gaming ethic — an ethic which suggests that being fair is basic to all endeavors. If the conceptual future does not resolve the athletic problem, there is a good chance that athletics will have no theoretical future to worry about. Perhaps then we will return to the established gaming principles.

The organization of physical education will reflect the body of knowledge to which physical educators lay claim. The Alliance will continue, as an enabling organization, to support its historic interests in all areas dealing with human health and maintenance. It will be the obligation of the National Association for Sport and Physical Education (NASPE) to be the custodian of the concerns designated by physical educators as their responsibility. The budgeted future is already sponsoring the development of the subject-matter academies within NASPE and the splinter groups which are now organized to be attentive to specific areas of physical education will ultimately find their niche in the NASPE organization. The organization of meetings, conferences, symposia; the publication of journals, newsletters and reviews; and the watch-dogging of trends and forces will be germane to the NASPE charge.

The continued concern for pushing back the frontiers of knowledge regarding physical education will be served best by individuals and groups who are less interested in procedural operation, power and visability and who are more interested in disciplinary interaction. The conceptual future for NAPECW and NCPEAM is as a merged organization. The federation of the isolates which are interested in sport would be ill-advised and ultimately deleterious to the total physical education effort. Until such time as like organizations regarding human movement are instituted, any federation would tend to extract sport from physical education or substitute sport for physical education. The proliferation of the sport "interest groups"

suggests that the Alliance has been inattentive to an important component of its structure. When that oversight is corrected, there will be less necessity for the organization of satellites. Indeed, already in the conceptual future is practical difficulty for the satellite groups which are in the process of discovering that meetings, publications, and professional influence do not spring full blown from the head of Zeus. Such enabling endeavors take the dogged determination and constant attention of people who are disseminators rather than producers of ideas.

Because people continually band together to foster their own ends, there will continue to be a proliferation of interest groups in the theoretical future. Such organization is a necessary step in bringing change to the large more rigidly organized Alliance. Those yet to be identified groups will continue to shape the organizational future of physical education.

The operational modes and methods of physical education have a history of school influence. However, in the budgeted future, people outside the school (those too young to go to school and, most especially, those who have finished their formal schooling) have already insisted that some organized attention be accorded their activity needs. Presently, you and I continue to act as though the patterns of human movement which we employ in our programs (sport, gymnastics, aquatics and dance) belong to the young and any meaningful movement behavior is the prerogative of those within the first quarter century of their life. This will change.

In addition, within our programs of professional preparation there have been a number of stereotypical approaches. Traditionally, physical education has been segregated as to sex, has been built around the acquisition of sport skills, has taught most skills at the beginning level, and has treated clients in terms of behavioristic conditioning methods. Physical education courses have seldom carried academic credit, have often been required, have catered to motor behaviors, ignoring both the affective and cognitive realms, and have seldom made demands for out-of-class preparation or out-of-class enrichment. The budgeted future is already changing much of that.

The passage of the Guidelines for Title IX of the Omnibus Education Act of 1972 and various litigations have insisted that opportunity in both physical education classes and on athletic teams be made available to males and females and that one group not be accorded privileges that the less advantaged group does not have. In practical terms, this means that our budgeted future will be attentive to asexual approaches to physical education. The conceptual future of asexual physical education will ordain curricular change. High risk activities which are primarily dependent upon strength will be deemphasized in physical education programs. Those activities which do not have social endorsement for coeducational approach (i.e., wrestling) will be temporarily shelved until social approval is accorded.

In the conceptual future, the methods of operation for physical education will reflect social conscience to a greater degree than they have in the past. The great push toward humanistic interaction will be felt in the last stronghold of behaviorism, sport. The organization used to structure sport will change to include teacher/learner and coach/athlete planning. Rules governing conduct will reflect the social environment and sport will be programmed to be inclusive rather than exclusive. Emphasis will be placed on the affiliative, cooperative interactions of sport. In the theoretical future, it is possible that numerical position will not represent a value; instead, it will represent a position. Being number one may not be of any more worth than being number two — especially if number two tries harder.

In the theoretical future, physical education will take its rightful place in the school and will no longer be delegated to second class status. Overt recognition of this will come about as physical education courses are granted the privileges of "academic pay-off". Credit for course work will foster attention on all of the behavioral domains and regard for cognitive and affective behaviors, as well as motor behaviors, will emerge. Students concerned with bowling may be reading research about speed and accuracy, may be observing the notated patterns used in ten pins and duck pins, may be experimenting with interpersonal aggression as a part of a bowling team, may be describing the feeling and meaning of the bowling phenomenon in terms of fine arts, and surely will be understanding the self through the bowling experience.

It will be possible for prospective practitioners of physical education to continue to concentrate on specific aspects of their body of knowledge. There will be room for the

movement theorist, the teacher of motor skills, the coach, the dancer, the excercise physiologist, the kinesiologist, the sport sociologist, the athlete and many many more proponents of the art and science of human movement.

The budgeted future, the conceptual future and the theoretical future are joined together in a prognosis of entry into Century III. The World Future Society and the futuristic literature suggest that as we start to count ahead in Century III, there are certain premises upon which our future should be based.

First, we will be a part of interdependence as opposed to both dependence and independence. Dependence breeds revolution; independence breeds apathy; interdependence breeds progress. Secondly, the most pervasive force in sponsoring change will be valuing, and it is to be noted that values are as attentive to the heart as they are to the mind. Thirdly, the future will sponsor alternatives — it cannot be tracked. Fourthly, preparation for change will be based upon systemic rather than symptomatic problems. And lastly, the future must be planned for immediately; for the longer one takes to begin planning the future, the higher the price.

Interdependence, valuing, alternation, preparation and immediacy are ways to count up, a way to go from naught to something. When you count backwards, you reach an end and to go beyond that end forces you to enter a negative area of advancement. To count forward gives you a multitude of ends — no one better than another, and the next always dependent upon the last. To count forward is to plan for positive progress.

Our distant past suggested that we should count one, two, three to add up our assets. Our immediate present has insisted that we count three, two, one to analyze the total and strip away sequentially that which was not essential. As you and I prepare for entry into Century III, we begin the forward count of one, two, three — moving from little to much, from nothing to something, and from a blast to becoming. Here we come, ready or not!

Professional Tools of the 21st Century

KINESIOLOGY AND BIOMECHANICS

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Under the broad heading of this session's stated theme, "Professional Tools Of The 21st Century," I would like to focus my comments on some of the recent advances in technology in the areas of kinesiology and biomechanics. The growth in knowledge about human movement appears to be directly related to the *rate* at which improvements have occurred in instrumentation.

Although kinesiology, the science dealing with motion, had its origins around the 3rd century, B.C., with the observations and principles described by Aristotle and Archimedes, it was not until the past century (the 1800's) that instruments such as the ergograph, the galvanometer, and the camera were developed to aid in the study of the physical actions of man. During the first 50 years of this century, the principal tools used to analyze human motion were the electromyograph and the motion picture camera. Yet, for the most part, the collection of data using these tools required rather laborious and time-consuming manual work and the resulting data were mainly descriptive in nature.

With the advent of this country's space program in the 1950's, technological advances and their application to many fields of study increased almost exponentially. During only the last ten years, for example, the use of force platforms, high speed motor driven cinecameras, automated motion analyzing devices, and computers has become almost commonplace in both the reasearch and the teaching of kinesiology and biomechanics. Consequently, it becomes rather difficult to hazard any predictions about what the 21st century may bring. In fact, if the past ten years are any example of the explosive rate of new instrumentation, it may be difficult to predict what developments might occur during even the next ten years let alone during the next 24 years. In any case, though, the future for the fields of kinesiology and biomechanics looks exceptionally promising and exciting.

You may have noticed that I have been using both the terms KINESIOLOGY *and* BIOMECHANICS in reference to the field of human motion analysis. I feel strongly that the name KINESIOLOGY is still viable and informative because of its historical roots and perhaps broader recognition and implications. Yet, the name BIOMECHANICS has re-

cently been used in many publications and course titles in preference to kinesiology. I believe that both terms have their unique connotations and, thus, both have a place in our profession.

Biomechanics, the science which investigates the effects of internal and external forces on living bodies, is not really a new discipline. What is relatively new, however, is the widespread interest in the application of biomechanics to the many aspects of human motion. Since the early 1950's paralleling the technological era of space science, biomechanics has emerged as an important area of scientific study in a variety of disciplines, — aviation medicine, automobile safety, biomedical engineering, industrial psychology, and orthopaedic surgery, as well as in sport and physical education. In fact, most of the equipment developed to analyze human motion has been designed by scientists and engineers working in disciplines other than sport and physical education. The challenge for us in physical education is to interact with researchers in all facets of biomechanics, and to become familiar with the equipment used in these other disciplines so that we can make maximum application of these most recent instrumentation developments to our unique area of human motion analysis.

I would now like to describe four rather new thrusts in the study of kinesiological and biomechanical aspects of human motion. As you might expect, new developments in technology or in analytical techniques serve as the basis for these new directions of study. I think you may find that, in the near future, you will be hearing about these new approaches with increasing frequency.

The first of the newer techniques for analyzing human motion that I will describe is non-photographic, in the sense that it does not produce images recorded on celluloid film. Several versions of this technique have been devised, and most involve placing either a miniature signal transmitter or signal receiver on the subject, then recording the signal electronically to obtain linear and angular data describing the subject's motion. One new technique is called "polarized light goniometry", shortened to POLGON by some (1)* The term "goniometry" means "angle measurement." You may already be familiar with the technique of electrogoniometry, in which an ELGON — basically 2 hinged bars of light metal or plastic — is placed on segments on either side of a joint, with a potentiometer at the hinge producing an electrical signal to record change in the joint angle.

Using polarized light goniometry requires that one or more small half-ounce signal receivers be placed on adjacent segments of the subject and connected to the main circuitry by lightweight, flexible cables. Each receiver consists of two tiny photo-electric cells placed behind polaroid disks. When a beam of polarized light hits this receiver, the photo-cells detect an on-off signal due to the alternating alignment and non-alignment of the light through the polarized filters. The signal is processed to produce time referenced measures of angular displacement and angular velocity.

The advantage of the POLGON technique over electrogoniometry is that the equipment attached to the subject is much lighter in weight and thus would not interfere with normal movement as much as an elgon might. However, the POLGON technique requires that the subject's movement be essentially in a plane perpendicular to the polarized light source, while electrogoniometry places no restrictions on the subject's position. Neither electrical or polarized light goniometry can yet be used easily on multi-axial joints to record three-dimensional joint motion. Applications of the new polarized light goniometry technique have produced joint angle data in human gait analysis, but small levels of noise or unreliability in the system, until corrected, would make this technique unacceptable for measuring the fast angular movements in many athletic skills.

Other non-photographic techniques include those in which either a light colored marker or a light source (such as a small high-intensity lamp, a light-emitting diode, or a tiny laser) is placed on a given body landmark. Several light sources, each on a different body landmark, can be powered from a lightweight battery-pack mounted on a belt around the subject's waist.

A camera is used to collect and process x,y position data describing the changing location of each light source affixed to the subject. However, this camera is not of the typical type that records images on film.

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*Number in parentheses refers to a reference listed at the end of this paper.

Instead, its optical system basically consists of an array of silicon photodetectors, coupled in some cases with image intensifiers, which convert the optical image, (that is, the dots of light on the subject), into its electronic binary equivalent. The resulting binary signal is immediately stored and processed by a computer which then prints out, displays, or formats for tape entry any pertinent information about the data, as determined by the software program. For example, the x,y position of each body landmark in a fixed coordinate system can be obtained, as well as the velocity and acceleration of that point, or its angular motion in relation to points on adjacent segments. One such opto-electronic system proposed in England (2), and still at the theoretical stage, requires three interconnected electronic cameras placed in a stereoscopic arrangement to produce the true X,Y,Z, or three-dimensional coordinates, of each light source on the subject.

To summarize the potential of the optical image digitizing techniques, compared to high-speed filming, it can readily be admitted that they have the advantage of giving an immediate result without the need for processing and measuring tens of thousands of film frames. However, most of these techniques are still in the prototype stage, are extremely expensive, require advanced knowledge of both electronics and computer programming, and presently have some serious restrictions on the collection of valid data from human motion skills that are fast and complex and are performed in non-laboratory settings. These instruments may truly be among the professional tools for the 21st century.

A second new approach to the analysis of human motion is "computer simulation", which has been used extensively in engineering, business and medical research but has only recently been applied to sport. However, since 1968, the rapid growth of simulation studies in biomechanics has been impressive. In computer simulation, a simplified mathematical model is developed consisting of a series of appropriate equations which represent a biomechanical system. The term SYSTEM may encompass, for example, the total body of a diver, the arms and club of a golfer, a javelin in flight, or the swing leg of a high jumper. Once the mathematical model of the system has been programmed for solution on a digital computer, it is validated against experimental data, and is then used to simulate the behavior of the system under rigidly controlled conditions.

For instance, a teacher or coach may wish to learn how a performance might be altered if the take-off angle were increased in a high jump, — or, if a longer but lighter club were used in a golf drive, — or if the arm swing velocity were increased during take-off in a springboard dive. It would be difficult to expect an athlete to be able to repeat all aspects of the performance exactly while introducing only the one variable selected for experimentation. A computer model, on the other hand, obeys instructions precisely and permits the investigation of how a single variable, or any selected combination of variables, may influence performance.

Computer simulation thus is able to provide carefully controlled conditions under which a sports skill can be studied, and is particularly well suited to cases which involve extensive mathematical equations. However, because the human body and its motion are extremely complex, any model used to simulate performance in sport must be simplified considerably. In the computer program, the body must be replaced by a series of rigid links whose biomechanical properties can be determined mathematically. The number of segments is usually reduced to a minimum and motion is often restricted to a single plane.

For example, Miller(3) developed a mathematical model which completely defined the position and orientation of the body during the flight portion of a dive. A 15 segment mathematical prototype of the human body originally developed by Hanavan was modified by Miller (Illustration #1)* to provide a 4 link representation of the diver. (Illustration #2) The model was restricted to the study of non-twisting dives performed in the pike and layout positions. With this model, it was possible to investigate how the total performance of the dive would be influenced by altering such factors as the body proportions of the diver, initial conditions at take-off, and limb movements. Computer output for the simulated dive included a three-dimensional graphics display of the performance. (Illustration #3)

Simulation models also have been developed to study tobogganing, golf, swimming,

*Illustrations in the form of slides and transparencies included in the original presentation have not been reproduced here. Instead, the source in which each illustration can be found is listed at the end of this paper.

long jumping, running, and weight lifting. Although it is recognized that computer simulation is a rather complex research technique, and can never duplicate the real world, this never-the-less does not detract from the fact that it can provide important information concerning the mechanics of human performance.

A third rather new development in the study of human motion is the technique of 3-dimensional film analysis. Since most sport skills involve movement of body segments in and out of several planes, it is not possible to obtain valid measurements of the motion from only a single camera view, unless extensive correction factors are applied. During the late 1960's, analytic techniques were borrowed from the fields of engineering and math and were applied to the problem of determining the spatial location of selected points on the body with reference to a fixed 3-dimensional coordinate system. Preliminary studies applying these techniques to study throwing skills employed rather time-consuming manual methods of calculating the X, Y, and Z spatial coordinates of ball velocity prior to release. (4) Since that time, two slightly different mathematical approaches to 3-dimensional film analysis have been programmed for the computer and have produced valid data upon each occasion of their use.

Miller's (5) approach to 3-dimensional film analysis is based upon the geometric concept of similar triangles. The approach we have been using at the University of Arizona (6) is a modification of work originally developed by a Czechoslovakian named Susanka, and is based upon the concepts of vector algebra. (Illustration #4). Both of these approaches require an identical filming set-up involving a minimum of two cameras whose optical axes intersect at a known point in the same horizontal plane, and are separated by a known angle, — which is 90 degrees in this diagram. Both approaches also produce identical results when used under the same conditions, although the vector approach provides additional output data to help the user judge the degree to which validity of the resulting 3-D point location is affected by measurement error and/or failure to match-up film frames of the same event filmed by the two cameras.

This diagram (Illustration #5) illustrates the manner in which the end point of a vector from Camera A placed on the X axis, and a vector from camera B placed on the Y axis, can be defined mathematically if these vectors intersect at point M, which may be a marker placed on the subject's hand. Data from the films taken simultaneously by both cameras are merged in a computer program and the true spatial X, Y and Z coordinates of the point of interest are calculated and expressed with respect to the origin of the system.

Using this technique we have filmed skills such as the high jump event during the 1974 AAU National Track and Field Championships for Women. (7) Two simultaneous views of each performer were obtained from cameras placed along the X and Y axes of our defined coordinate system. Since some jumpers approached the bar from the right and others from the left, and some used the straddle while others used the flop technique, it was essential that a 3-dimensional analysis be conducted. It simply would not have been possible to reposition a camera at right angles to each jumper's final path of approach.

Measurements of the initial velocity and angle of projection of the jumper's center of gravity at take-off were made using the 3-D analysis techniques. Thus, for several of the components which determine height jumped, it was possible to compare data obtained for the best woman high jumper to data that had previously been collected (by Hay) in a case study of several jumps by Patrick Matzdorf. Perhaps the most surprising finding of this analysis was the relatively low angle of center of gravity projection by both jumpers.

Further research on these and other measures of high jumping skill is needed, of course, and should now be possible using three-dimensional film analysis techniques. Currently being developed and tested by others are even more sophisticated 3-D techniques which place no restrictions on the positioning of the cameras used. With these newer techniques, it should be possible to place cameras at different levels in un-obstructive locations and, as long as they photograph the same field of view and their relative location is known, performances during events such as the Olympic Games could be photographed for subsequent 3-dimensional analysis.

I would like to add that the three-dimensional film analysis technique we are using at the University of Arizona can be completed right within our own data analysis lab. Our Hewlett-Packard electronic programmable calculator system with peripheral devices includes a plotter and a digitizer and film analyzer. When the room is darkened, the user views individual film frames enlarged and projected within this film analyzing device. A small red

light emitted from an LED (light-emitting-diode) located in the target (or cursor) is reflected on the film and placed by the user on the point of interest to be digitized. One press of the sampling button on the cursor sends data regarding the x and y coordinates of that point to the attached Hewlett-Packard calculator where it is printed and stored for further analysis. Equipment of this type permits on-line data analysis for the purpose described here and for many other types of research in kinesiology and biomechanics.

The fourth and last new approach to the study of kinesiological and biomechanical aspects of human motion that I have selected to describe today, is really my favorite. Actually it is an application of advanced technology primarily in the area of teaching rather than in research. The PLATO system, which stands for Programmed Logic for Automatic Teaching Operations, represents the most advanced system being used currently in computer-assisted instruction. Developed in 1960 at the Computer-based Educational Research Laboratory at the University of Illinois, Urbana, this experimental teaching system has progressed through many phases resulting in the current PLATO IV system which has approximately 960 student terminals in operation in 24 states, Washington, D.C., Sweden and Germany. Our 12 terminals in the Computer Center at the University of Arizona are linked to the computer at University of Illinois by long-distance telephone lines, which in turn, make it possible for us to communicate with any user at any one of the terminals in the entire system.

I will briefly describe some of the PLATO IV features and then give examples of its use in areas including biomechanics instruction. Karen Fry, from the University of Illinois, will be speaking on Monday at the 3:30 session about PLATO and its applications in the area of curriculum planning.

The PLATO student terminal consists of an expanded 64-character typewriter keyset, which transmits the user's input to the Control Data Corporation (CDC) computer in Illinois. The plasma display panel can simultaneously show computer-generated graphic information *and* computer-selected photographic color slides to the user.

A sign-on page initiates access to a huge variety of lessons written for students. There are many areas of study in which PLATO lessons already exist. (Examples of these areas were illustrated in the presentation.) Lesson writing for PLATO uses a programming language based on English grammar and syntax, and is designed for teachers with no previous knowledge of computers. It is possible to write and edit PLATO instructional material on-line from any terminal while time-sharing the system with other authors and students.

Auxiliary equipment available includes a touch panel, which allows the student to touch the display panel instead of typing his or her input on the keyboard. For example, basic arithmetic lessons have been written for children to introduce them to such concepts as fractions, or adding negative numbers. (A series of slides was shown to illustrate some selected pages of a lesson in fractions written for young children.)

Another feature of the system is that PLATO can collect data on student performance in a lesson or parts of a lesson. This feedback for the teacher can automatically be stored by PLATO and is available in both a formative and summative manner. In addition to providing rapid and extensive storage, retrieval, and data-processing capabilities, PLATO allows the utilization of a wide variety of instructional logic modes, including drill and practice, simulation, gaming, Socratic, tutorial, and various combinations of these modes. If a PLATO site is located near you, I am *positive* that you will find this system one of the most promising and exciting alternatives to the usual classroom learning experience that exists today.

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ILLUSTRATIONS

Illustrations 1, 2 and 3 are included in the following publication:
Miller, Doris I. "Computer Simulation of Human Movement." Chapter 3 in: *Techniques for the Analysis of Human Movement*. by Grieve, D.W., D.I. Miller, D.L. Mitchelson, J.P. Paul and A.J. Smith. Princeton, N.J.: Princeton Book Company, Publishers. 1975.
1. "The Hanavan Model. (Hanavan 1964)." p.86.
2. "Four Link Diving Model. (Miller 1971)." p. 74.
3. "Computer Graphics Display. (Miller 1970)" p. 89.

Illustrations 4 and 5 are included in the following thesis:
Spray, Judith A. "Three-Dimensional Film Data Validation Procedures: A Vector Approach." Master's thesis, University of Arizona, 1973.
4. "Filming Site." p. 39.
5. "Vector Intersection." p. 43.

NEUROSCIENCES

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When I was informed that this panel was not to deal with research per se, I was somewhat relieved for it would be difficult to project in any specific sense what the next 26 years of experimental research holds in store for our profession much less trying to be prophetic about the 21st Century. However, beyond this one restriction, the session organizer, Donna Mae Miller, thought it better to allow us a free hand in determining on an individual basis what the theme should be. Although this complicated matters a bit, it did allow me to

interpret my charge rather broadly. I therefore decided to play it somewhat conservatively and provide you with a futuristic viewpoint, which in light of current trends, I think is reasonably safe in its prediction. The issue I have in mind concerns the future role of the physical educator or kinesiologist in the neurosciences and the implications this will have for undergraduate and graduate programs as well as their respective armamentaria.

As many of you know, the term "neurosciences" designates a cross disciplinary effort in the study of central and peripheral neural factors underlying the broad spectrum of normal and abnormal behaviors. Active programs of this sort are relatively new and date back to 1962 when the federal government funded the Neurosciences Research Program under the sponsorship of the Massachusetts Institute of Technology (Quarton, Melnechuck, & Schmitt, 1967). This development was followed by the formation of new multidisciplinary societies such as The Society for Neuroscience, founded in 1969 by action of the National Academy of Sciences (Mountcastle, 1970). Of the many areas of research pursued by this Society, those of particular relevance to physical education fall under the general category of motor control.

As the term "neurosciences" includes all disciplines or interdisciplines providing knowledge about the nervous system, then it is clear that researchers in our field actively engaged in neuromuscular research are recognized as neuroscientists. On the other hand, one might ask whether physical educators perceive themselves as serving in this role. One quick way to get an indication of this is to inspect the Directory of the Society for Neuroscience and note the parent disciplines of its members. It should first be noted, however, that a qualified "regular member" in this organization is defined in the Bylaws as:

> Any scientific worker residing in the United States, or adjacent countries who has done meritorious research relating to the nervous system. . . In principle, all scientific workers, regardless of primary discipline, who have communicated evidence of serious scientific study of phenomena related to neural function, are eligible to become Regular Members. (Article III, Section 2)

Given this constraint, we see in 1970 that out of approximately 1100 members, one physical educator could be identified. Jumping to the 1976 Directory, only four physical educators are listed out of a membership exceeding 3000. On the basis of this data, one might be inclined to think that researchers in physical education have maintained, at best, a rather lukewarm affiliation with the neuroscience movement. However, there are several observations which convince me that these enrollment figures should not be taken seriously, and that physical educators will play a very important and active role in the neurosciences in the 21st Century. I foresee this occurring primarily on the basis of current trends in research, composition of professional research publications, and recent curricular developments emerging at selected Universities.

Turning our attention first to trends in experimental research in physical education, we see good evidence of a gradual shift in scientific focus in both the exercise sciences and motor learning. For example, research in exercise physiology over recent years has been increasingly oriented toward acute and chronic cellular adaptations incurred through training. Characteristically, the substrate investigated has been neuromuscular. This overall pattern in research is clearly revealed by noting the nature of the studies presented in recent years at the Annual Meeting of the American College of Sports Medicine. One finds an obvious growth in the number of papers and/or symposia dealing with neurologically related factors and, more specifically, with investigations aimed largely at the mutable characteristics of motor units to exercise stress. This latter focus indicates an inevitable encounter of exercise physiologists with mysteries associated with the central neural regulation of muscle. In this sense, I am referring to the overwhelming evidence in support of neurotrophic and frequency coded control factors involved in the determination of muscular properties (e.g., see Guth, 1968; Pette, Ramirez, Muller, Simon, Exner, Hildebrand, 1975).

As for behavioral research in motor learning or motor control, we have witnessed renewed interest in the past decade in experimental designs that have been formulated to test theoretical aspects of neural sensorimotor processing. A good portion of this work has been centered around the question of how a hypothetical motor program can be updated or modified through a detection system that monitors information provided through central as

well as peripheral feedback channels. I must confess that this exceedingly complex question actually precedes our neurophysiological understanding of what it is that is actually being transacted through so-called corticofugal monitoring (e.g., see Towe, 1973). On the other hand, however, one could also argue that there is enough evidence in support of such monitoring to hypothesize almost any loop property that one might care to suggest. The point I want to make here is that, in the future, I expect to see more physical educators pursuing the necessary supporting neurophysiological evidence themselves rather than waiting for others to elucidate the fundamental role these pathways play during the execution of movement.

Certainly the potential interest in this type of research is there. This was well manifested at the recent meeting in Austin, Texas, of the North American Society for the Psychology of Sport and Physical Activity. To my knowledge, for the first time in the history of this organization, a special one-half day symposium was presented dealing exclusively with neurophysiological issues in the area of sensorimotor integration and related adaptive properties of hierarchial systems. Several free exchange papers were also relevant to these concerns. As a participant and observer, I can assure you that within this Society there is a growing nucleus of neuroscientists from whom we will hear a great deal in the future.

Now then, one might ask if the research literature serving the needs of the physical educator reflects a neuroscientific trend. I think such volumes as the Journal of Motor Behavior (JMB), the Congress Proceedings from the International Society of Biomechanics, the relatively new Journal of Human Movement Studies, and the Exercise and Sport Sciences Reviews (ESSR) certainly support this notion. For example, in both the *JMB* (Note 1) and the *ESSR* (Note 2) over 40% of the articles appearing in recent issues are either directly concerned with classical neurophysiological research or this research is found interwoven with the experimental psychology literature providing an integrative approach to problems in motor control and motor learning. I might also add that the Editorial Boards supporting all of these journals are amply supplied with neuroscientists, including in one case (*JMB*), the former president of the Society for Neuroscience, Edward Evarts.

If these brief comments have been persuasive enough to convince you that more and more researchers in physical education or kinesiology are utilizing and participating in what is considered to be neuroscientific research, then I should be able to produce evidence that such a trend has had an affect on graduate programs. In the United States and prior to this year, while certain doctoral programs in physical education could be identified as having sufficient flexibility to allow concentrated studies in the neurological sciences (Note 3), I was unable to detect with any certainty a program where a *formal* curriculum had been streamlined to serve this particular end. Perhaps, curricular offerings at Teachers College at Columbia University closely approximate what I had in mind in terms of an appropriate blending of course work in neurophysiology, neuroanatomy, physiological and experimental psychology, physical education and related foundation courses. I am also aware that similar curricular possibilities exist at the University of Wisconsin at Madison.

Actually, for quite some time now I have been anticipating the announcement of a formal doctoral program, with heavy neurological leanings, from a number of Universities serving our field. The time has finally arrived for I see that the University of Texas at Austin has recently announced a doctoral degree in physical education with a specialization in motor control. I might note that included in their curricular outline is over 60 hours of coursework in neurophysiology, psychology and physical education courses specifically tailored for this specialization. Dr. Waneen Wyrick Spirduso and her faculty are certainly to be congratulated for this accomplishment. I am reasonably optimistic that similar doctoral offerings will follow at other institutions in the not too distant future. In fact, I expect a doctoral program similar to Austin's to soon appear at the University of California at Los Angeles followed by our own at the University of Washington in Seattle. I hasten to add that if in this discussion I have inadvertently omitted a doctoral or graduate program that fits into this scheme of things, I would appreciate being so informed during the course of this workshop.

If I am correct in forecasting a growing generation of neuroscientists working within the field of physical education then these same scholars will be eventually knocking on doors looking for work. They will represent a rather expensive commodity for, generally, their interests will bring with them the need for electronic and technical support if they are to be actively engaged in research. To give you an example, I would like to show you a few slides. While you may finally have gotten used to seeing instrumentation in physical education

depicted by my first two slides, the third slide gives you only a modest indication of things to come in motor control research. Assuming that the technical support is available for building some of your own components, you are looking at approximately $25,000 worth of electronic equipment. That is excluding the computer support facilities that are rapidly becoming more essential and commonplace in this type of research. Fortunately, as you will note from the fourth slide, this sum deals with an initial outlay for hardware that is reasonably durable if placed in the right hands. Unfortunately, this is not the type of instrumentation you would use in student laboratories other than for classroom demonstration purposes.

After the addition of a neuroscientist to your staff, next comes the introduction of new courses. Since neurophysiological concepts can be reasonably dull, if not downright boring when presented solely in a lecture format, the next immediate expense is tied to laboratory facilities for student use. Aside from the availability of space, these facilities may involve equipment to be used in laboratory experiments dealing with basic sensorimotor electrophysiology and/or you may also wish to avail yourself of the excellent audiovisual resources and self-instructional units that are and will be rapidly becoming available through the collective efforts of neuroscience agencies (e.g., see Note 4).

Considering equipment for student projects first, barring improvement modifications, you are still likely to see the storage oscilloscope as your basic laboratory tool in the 21st Century. I personally prefer these over chart drive recorders as they allow more flexibility and are much cheaper to maintain. Permanent data storage is their major limitation but there are ways to get around this problem through appropriately designed experiments. Add to these, stimulators, electrodes, elgons, numerous transducers, connectors and leads and you will have the basic equipment for a wide range of laboratory exercises from which to select. Most of this equipment can be made noncommercially. Naturally, we will eventually witness the publication of related lab manuals should such programs catch-on in sufficient quantity to entice an unsuspecting publisher. Until that time arrives, I would be more than willing after this session to share with you some of my own ideas concerning student experiments.

For those of you interested in expanding your existing program in the exercise sciences or motor learning to include elements of neurophysiology and neuroanatomy without a total commitment to research or student lab facilities, you will be pleased to know there are excellent audiovisual aids that are becoming available on the commercial market or, in some cases, are loaned-out free of charge from various institutions (see Note 3). I would like to close my talk by referencing one of them and then showing you an example of what can be expected in the future concerning instructional material available in the neurosciences.

For those of you that have always had difficulty verbally conveying such principles as the ionic basis of action potentials, spike propagation, synaptic transmission, sensory transduction, and the like, I would highly recommend a tape-slide, self-instructional series, edited by Pinsker, and issued through Life Science Associates in New York. The principles are presented with exceptional verbal and visual clarity and students may proceed through seven units at a speed of their choice.

Although tape-slide, audiovisual aids have not been exploited qualitatively to their fullest, they certainly do not represent a new instructional tool for the 21st Century. However, a dramatic departure from tradition can be seen in the use of computer technology to produce three dimensional animation. Therefore, I made an effort to procure a film that exemplifies an innovative and rather experimental approach to the study of the central nervous system. What you are about to see is a portion of a computer animation of the cerebrum which has been reconstructed from x, y, z coordinates taken from serial sections of human brain tissue. From this, several thousand vectors were computed in a manner to allow a three dimensional portrayal of the brain with rotating axes, thus, providing external and internal views from all sides. By using three primary colors, neuroanatomical structures were also color coded. The advantage of this in a structural sense is the depiction of size, shape, and spatial relationships which cannot be achieved through two dimensional representation. I am greatly indebted to Dr. William Atkinson from the Department of Physiology and Biophysics at the University of Washington, for loaning me this film of his exhaustive work. I think you will agree that such techniques offer interesting and promising tools for research and instruction in the 21st Century.

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PHILOSOPHY OF SPORT AND HUMAN MOVEMENT

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Some persons do philosophy as if it were a great word hunt. The primary advantage of this approach is that a lack of understanding presents no major difficulties to its successful conclusion. In fact, the less individuals know about a given matter, the greater freedom they have in searching for the "right" words and phrases. And the less that people understand,

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the more delighted they are to discover or invent the language to express what they have yet to figure out.

The joy of the great word hunt usually turns to disaffection when it is realized that the words discovered are generally useless. Persons have been known to repeat such terms to themselves thousands of times, converted them into different languages, meditate on them and sleep with them. But sadly, no increase in understanding generally occurs.

George Orwell understood that word hunts in the absence of clear thinking were futile. "(The English language) becomes ugly and inaccurate," he said, "because our thoughts are foolish, but the slovenliness of our language makes it easier for us to have foolish thoughts." (1:144) The corollary to this maxim for philosophers of sport and human movement might be: Their language becomes obscure and evasive in direct proportion to the magnitude of their confusion, and the continuation of their confused thinking is fostered by the habitual use of obscure and evasive language. Might not an appropriate tool for philosophers of the 21st century be a clear language which fosters and expresses clear thinking!

The senselessness of the word hunt may be best seen by examining the results of one such excursion. This is an excerpt from a philosophical description of sport. While the example includes some extreme difficulties, the kinds of problems involved are characteristic of much work in the philosophy of sport and human movement.

> *Contention of Interest.* All activities so designated as *sport*, within this analysis, possess a quality which indicates that within the activity the participants, whether teams or individuals, contend differing interests and desires. Philosophically, those individuals writing in "game theory" have called this "conflict of interest." More commonly the term competition is used. However, the phrase *contention of interest* implies a *directed commitment* that is perhaps not as strongly implied in the term competition. In other words, in sport man overtly, through obvious thought, has an interest that is contended by either man, animal or nature. (All emphases his) (3:46)

While individuals who play the word hunt may not eventually know what they are talking about, they do have some guidelines for the search for and eventual use of words. Five of these "rules of the game" appear to have been used in composing the above quotation.

Rule # 1 **It is far easier to *name* an argument or position than carefully defend it.**

Howard Slusher, the author of this analysis, appealed to writings in game theory to support his view that sport involves a "contention of interest." Yet "game theory" is only named; it is not explained. Given a connection between one of the necessary characteristics of sport and "game theory," it would be helpful to know how many plausible theories are included in this area of study and how "contention of interest" stands in relation to these. What specific insights from "game theory" might help to clarify human understanding of sport acts? Why specifically is "contention of interest" superior to "competition" in describing sport?

Rule # 2 **It is far safer to use words which are obscure or ambiguous than those with clear meanings.**

There appear to be at least seven instances of ambiguity in important passages. "differing interests and desires," "game theory," "conflict of interest," "contention of interest," "competition," "directed commitment," and "through obvious thought," can be taken in a number of different ways. Because each of these words and phrases is ambiguous, it is difficult to discover which interpretation Slusher himself preferred or even whether or not he was aware of the number of meanings his words have. More importantly it is impossible to find out whether Slusher was accurate or inaccurate and whether or not any philosophic progress was made.

Rule # 3 **It is far more effective to be pretentious in the use of language than clear.**

The terms "contention of interest" themselves may well have a meaning which could have been expressed much more directly. Is "contention of interest" synonymous with

competition, contesting, or arguing? Is contending an interest simply attempting to do better than another in a common activity? Or is it only taking a test (solving a problem) whether or not other persons are involved? While "contention of interest" has the ring of academic respectability, it does not have a clear sense in common language.

Rule # 4 **It is far wiser to quickly abandon discussion on difficult topics than belabor personal ignorance.**

Slusher made at least five claims which were "quickly abandoned." 1) "Contention of interest" is a necessary trait of sport. 2) "Contention of interest" requires a "directed commitment." 3) The theory of "contention of interest" is a product of the broader area called "game theory." 4) "Competition" does not describe the sport act as well as "contention of interest." 5) Persons can contend with other persons, animals and nature. Did Slusher think that all of these claims were self-evident and thus, without need for further argument?

Rule # 5 **Wherever possible, use words and phrases which are, in the last analysis, meaningless.**

It is felt that if persons can say nothing eloquently enough, others may not notice the absence of content. Slusher's phrase," . . . *contention of interest* implies a *directed commitment* . . ." may be of this variety. While it cannot be claimed with certainty that Slusher had nothing in mind when he wrote those words, the fact that he underlined five of seven words could indicate that he was concerned about saying nothing without minimal emphasis.

In contrast to the largely meaningless conclusions drawn by those philosophers who go on word hunts, there are the rich, but often wordless, insights of more patient individuals who carefully examine sport and human movement. How superficial it seems to them to attempt to reduce sport acts to something called "contention of interest"!

Think about the tremendous variety of ways in which a simple golf ball can be stroked — tentatively, fearfully, anonymously, anxiously, aggressively, confidently, rhythmically, awkwardly, knowingly, questioningly, forcefully, tenderly, directly, glancingly, impatiently, and so on. These kinds of acts seem to flow, as it were, from one to another. There are other acts which are complexes of more than one of the simple acts listed above. For instance, a golfer can act toward a ball anxiously *and* tenderly, or confidently, rhythmically, *and* glancingly.

The ball, for its part, displays yet further characteristics which can add to the complexity of the golf act. It might be hidden, distant from its "goal," near the objective, sidehill, downhill, buried, obstructed, inviting, vulnerable, defiant, lively, dead or familiar, among countless other traits. Combining the subjective and objective aspects of golf, a moment of lived experience might be stroking a sidehill, buried ball anxiously and unrhythmically or hitting a vulnerable and lively ball through a knowing and aggressive act. How marvelously complex is this relationship between a person and a small white ball! And to think that questions of motive (testing, contesting, exercising), of mood or atmosphere (playful, celebrative, worklike, laborish) and of means for accomplishing sport acts were not even considered in this short description!

Thaetetus once declared, "By all the Gods, Socrates, I really cannot stop marvelling at the significance of these things, and at moments I grow positively giddy when I look at them." (quoted in 2:96) Are we "positively giddy" when we look at the immense realm of sport and human movement? Are we sensitive to the subtle innuendoes as well as the gross generalizations which distinguish this from that in our field? Will the language we use in the 21st century be a tool which expresses and reinforces this insightful sensitivity?

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MEASUREMENT IN PHYSICAL EDUCATION: PAST, PRESENT, FUTURE

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Measurement and evaluation in physical education is often identified as an area encompassing the "tools of the trade" rather than a theoretical area. For this reason, some physical educators specializing in other areas do not recognize the field of measurement in physical education as a legitimate area of specialization. Although the state of the art of measurement tools will be discussed later in this paper, the initial portions will be devoted to the theoretical aspects of measurement and evaluation.

MEASUREMENT THEORY

Although attempts to develop rigorous evaluation models have occurred primarily within the past two decades, some measurement theories were in initial stages of development during the early part of this century. The predominant theoretical areas in measurement can be classified as follows: (1) the measurement of between-individual differences, (2) the measurement of within-individual differences, and (3) criterion-referenced measurement. Even though physical educators have made very few contributions to theory development, the measures used in our field are based upon these theories. Therefore, these three areas will be briefly reviewed.

The Measurement of Between-Individual Differences

There are a number of theories of measurement which apply to measures of between-individual differences (Lord and Novick, 1974). These theories are based on definitions and theorems that can be proved mathematically. The best known of the group is the classical test theory model, in which the individual's score on a test is defined as reflecting a true component and an error component. This can be expressed in the following way:

$$X = T + E,$$

Where X = obtained score
T = true score
E = error score.

The obtained score is the score an individual actually receives on a test, while the true score is the individual's score if there were no error. In order to be able to break down the obtained score into parts that are additive, variance estimates are computed for each component. The

variance must be determined using group data, and individuals in the group must differ in order to obtain a variance estimate greater than zero. Therefore, whether it is the intent of the test user or not, individuals are expected to differ on this type of test and a person's score is always interpreted relative to the scores of others in the group.

The whole of reliability and statistical validity theory in the classical test framework is derived from this basic definition and the underlying assumptions. Most of our tests in physical education have been developed using this model. When test validity is estimated by correlating test scores with scores on a criterion test, the classical test theory model is being applied. This is also the case when the Pearson product-moment correlation coefficient or the intraclass correlation coefficient is used to estimate test reliability.

The Measurement of Within-Individual Differences

Within-individual differences are often considered in the context of growth or change or — in education — improvement. This area is generally of greater interest to most educators than between-individual differences. The measurement of improvement has still not been satisfactorily resolved and the present time, although a new area identified as *edumetrics* (Carver, 1974) — measurement in education — may serve to focus more attention in this direction in the future.

In a somewhat different sense, the study of within-individual differences also encompasses intraindividual variability, to which Franklin Henry (1949, 1959a, 1959b, 1970) made many contributions. Here the question of interest is: How does an individual vary on repeated measures of the same test, and does this variability change as a result of treatment. Intraindividual variability, despite the extensive treatment of this topic by Henry, has been given little attention by physical educators with the exception of Henry's students and colleagues.

Criterion-Referenced Measurement

A theoretical area of increasing interest to measurement specialists is that of criterion - referenced measurement. When criterion - referenced tests are used, there are generally no constraints on the number of individuals who can meet a specified criterion; therefore, individual differences are neither expected nor sought. Theory in this area is in early stages of development. Both reliability and statistical validity procedures must be developed outside of the classical test theory framework.

EVALUATION THEORY

Turning to evaluation theory, numerous models have been developed in recent years. Some models are designed primarily to evaluate educational programs. These models can be classified as decision — management, judgmental, and decision — objective (Worthen and Sanders, 1974). A major distinction between these groupings is the extent to which the evaluator makes judgments on the basis of the evaluation data.

Other models have been developed for criterion - referenced measures. These models are designed to meet two needs, one related to the definition of mastery and the second, to the issue of *a priori* standards (Meskauskas, 1976).

CONTRIBUTIONS OF PHYSICAL EDUCATORS TO THEORY DEVELOPMENT

The preceding paragraphs are not intended to provide other than the briefest overview of theory in measurement and evaluation by noting the historical and current highlights. Few physical educators have made significant contributions to these theoretical developments. A few exceptions are Franklin Henry and his work on intraindividual variability and Ruth Glassow and Marie Liba's development of the concept of logical validity, although the latter is not associated with a measurement model. Some of our younger colleagues are beginning to conduct theoretical studies in measurement (Stamm and Safrit, in press; Korell, in progress), and such contributions will undoubtedly increase as physical education produces more measurement specialists who are well-trained in both test theory and mathematics.

MEASUREMENT TOOLS

Moving now to measurement tools used in physical education, two types of tools are of

particular interest. One type includes the variety of tests and instruments used in our field, and the other, the familiar statistical tools used in developing tests. The tests will receive greater emphasis, since this type of tool is of widespread interest to all members of our profession.

Tests

The greatest progress in test development is being made in the area of the affective behavior. At the recent national convention in Milwaukee, reports were given on at least five new tests in this area. For example, Cheffers and Mancini (1974) have developed a *Human Movement Attitude Scale* to be used by elementary school children. The scale is non-verbal, using the medium of a caricature to depict the specific parameters under study. Gill (1976) reported on a study in which the *Sport Competition Anxiety Test* was used as a predictor in identifying persons who become more or less anxious in competition. In a third report, an attempt to develop a unique sport — specific personality inventory called the *Tennis Personality Inventory* was described (Elmore, 1976). A scale to measure children's anxiety in the physical education environment has been adapted from a classroom scale (Rupnow, 1976). In addition, four new or adapted attitude scales have been reported in the *Research Quarterly* since 1970 (Kroll, 1976; Seaman, 1970; Simon and Smoll, 1974; Sonstroem, 1974). No effort was made to locate unpublished affective instruments but it is likely that a substantial number in this category are in existence.

Considerable work in this area has been conducted by social psychologists in physical education along with sport sociologists. Although most measurement specialists in our field have displayed more than a passing interest in measurement in the affective domain, almost none have devoted extensive time and energy to this area, with the exception of Rosemary McGee.

In the area of motor performance, which is recognized by many as our unique area of concern, much less has been accomplished recently. Only one skill test (Shick, 1970) has been reported in the *Research Quarterly* since 1970. It is likely that some tests are being developed annually as a part of theses or dissertations, but many of these instruments are never published. In the absence of an established testing service geared to the needs of the physical educator, our graduate students may continue to be our most prolific, although not necessarily our best, sources of skill tests and tests of playing ability. Over the years our field has been fortunate in having a number of measurement specialists — McCloy, Glassow, Clarke, Rogers, Liba, and Scott, to name a few — who actively encouraged the development of skill and ability tests. Few specialists in measurement today are motivating their students to work in this very important direction. Thus, the current situation is not likely to change in the future unless sports specialists work with those in measurement to develop measures of motor performance.

Physical fitness also falls within the motor performance category. This area is in no danger of being neglected in the future. There has recently been renewed interest in redefining the concept of fitness along with developing a test battery that conforms to the new definition (Jackson, et al, 1976). This area of testing will continue to receive attention, partly because many of our colleagues in measurement and exercise physiology have special interests in this topic and partly because it is a popluar subject across many sectors of the general public.

Several aspects of psychomotor measurement will not be discussed in this paper. These include perceptual-motor tests and measures of dance, aquatics, and gymnastics. Their exclusion does not reflect a lack of importance, but rather an effort to delimit the types of tests reviewed.

The cognitive area has received the least attention in our field, as far as published materials are concerned. Several fitness knowledge tests (e.g., Mood, 1971), selected sport knowledge tests, and a test of statistical knowledge for graduate students in physical education (Burkhardt, et al, 1971) are available. Two published tests can be obtained from the Educational Testing Service (ETS). The Physical Education Cooperative Knowledge Test for grades 4-12 was developed jointly by ETS and the American Alliance for Health, Physical Education and Recreation (Cooperative Tests and Services, 1970). ETS has also published a Physical Education Undergraduate Program Test, designed for undergraduate physical education majors.

To summarize, contributions to test development in our field have been minimal. In the

area of motor performance, presumably one of our primary concerns, little work has been done in recent years. Three steps could be taken in the future that would improve considerably the status of tests in physical education. One, publish all existing tests in our field in a single source. Two, solicit critiques of these tests similar to those published in the *Mental Measurements Yearbook*. And three, form a physical education testing service to contribute to test development both directly and indirectly.

Research Design and Statistics

Measurement is often viewed synonomously with statistics, another type of tool used in the measurement area. While the two areas have quite separate identities, at certain levels they become interdependent. In addition, certain research design considerations must be taken into account in any form of test development, but especially when dealing with predictive and construct validity.

The measurement area is reasonably up-to-date in the application of appropriate statistical procedures in the development of measurement tools. For the most part, the contributions in this area have consisted of informing the members of the profession of appropriate statistical procedures to be used in estimating reliability and validity. Many of these articles were published during the 1960's. The most recent overviews on applications are a monograph on reliability theory (Safrit, et al, 1976) and the *Proceedings of the Big Ten Conference on Measurement and Evaluation in Physical Education* (Baumgartner, et al, in press). The measurement specialists in physical education appear to be dedicated to the concept of disseminating knowledge to others in our field, and there is no reason to believe this practice will not continue.

SOME FINAL CONSIDERATIONS

Much more could be said about other measurement topics that are being explored in physical education. A number of studies have been conducted on measurement artifacts, that is, sources of error that affect performance on a given test. These studies have ranged from those dealing with the effect of judges' expectations on the ratings of gymnastics performance (e.g., Scheer and Ansorge, 1975) to the effects of the sex of the test administrators on motor performance (e.g., Harney and Parker, 1972). Prediction in sport is also becoming a popular area of study (e.g., Cox, 1974).

Descriptive instruments are receiving increasing attention, especially within the areas of teacher behavior and student-teacher interactions. Another adaptation of Flanders' *Interaction Analysis System* is now available for use by physical educators (Cheffers, 1972; Cheffers, et al., 1974). New areas are being tapped for descriptive analysis, such as the *Implicit Values Instrument* (Bain, 1974) designed to examine the hidden curriculum in physical education.

In short, the future is promising in measurement and evaluation in physical education. Advanced technology will lead to the development of increasingly sophisticated measurement tools, and as measurement specialists in our field become increasingly competent, contributions to theory development will be limited only by their vision.

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Forum Focus: NAPECW Referred Paper

BIOMECHANICS: THE ROAD TO OLYMPIC GOLD

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Every four years, the importance of sport and athletic competition is brought to the attention of the people of the world in the form of the Olympic Games. Network television coverage of the games replaces prime time programming for the duration of the competition. At present the networks are involved in maneuvers to obtain the broadcasting rights for the Lake Placid games. These broadcasting rights represent high Neilson ratings and extensive financial return for commercial time. The many hours of programming reflect the growing interest of the populace in the games. Newspaper reports of major events in the Olympics can be found on the sports pages and on the front page. The extensive media coverage is found not only in this country, but in the iron curtain countries as well. The emphasis is very different, however, in the East from that in the West. In 1973, at a national conference on the Development of Human Values through Sport, Mimi Murray spoke of media coverage during the Moscow World Games and reported that, "Russian press releases during the Games emphasized the dominance of their athletes due to their superior political system." (8) Just recently at the Aerobics Center in Dallas, the Russian director of the Leningrad Research Institute of Physical Culture when interviewed by the Dallas news media reported that, "...the development of physical culture and sport is considered to be a great national importance by the Communist Party and the Soviet Government." (3) Inghram and Loy in 1973 wrote in *Quest* that, "...the result of international competition is not the consummation of the social euphoria of participation, but is the vindication of one nation's ideology over another." (4)

It appears that sports competition is important to free and iron curtain countries alike, but it takes two different forms. In Communist countries, the government is vitally involved and utilizes victorious sports performances as ideological proof of superiority. In the free countries, specifically here in the United States, nationalistic pride comes from the grass roots. Our government has thus far remained uncommitted to sport and competition, but

since the 1972 Olympics has become more responsive to involvement. A Congressional inquiry instigated by national indignation and concern was one result of the many incidents occurring during the 1972 Summer Games. The "gold medal" count and incidents like the last three seconds of the basketball finals served as stimuli for increased nationalistic feeling toward international competition.

Not only is the ideological difference between the U.S. and iron curtain countries demonstrated in terms of nationalistic pride but it is also shown through financial commitment. Kropke in 1974 reported that, "...the German Democratic Republic has embarked on an extensive sports program, the results of which are just coming to the international fore. Such a nationwide effort, a penetrating domestic commitment of both financial and human resources, rates the East German program as a vital component in that government's multilateral drive for international recognition and status." (5) The past Winter Olympics provided the world with dramatic evidence of the extent and success of their commitment. Not many United States television viewers could have missed the sports commentators' frequent discussions of the emergence of East Germany as a new sport power. The bobsled and luge events serve as excellent examples of the difference in commitment levels of communistic and democratic countries. The aerodynamic design of the sleds, clothing styles, and the new sports facilities were the result of an integrated approach by engineers, designers and scientists with the accompanying high performance levels. Compare this with the United States bobsled and luge conditions. The teams practice on a natural weather bobsled run that needs freezing cold weather conditions to be usable. If the weather conditions are not just right the team *must* travel to Europe to train. And when the team travels abroad in order to train, who bears the burden of the cost?

Cost, finances, facilities and governmental commitment are words that bring us to the issue of amateurism. Communistic sports programs are considered by many to be in violation of the concept of amateurism. How could the Russian ice hockey team defeat our United States professional teams? It is possible to provide strong financial backing without violating the interpretation of the amateur standing rules that we hold in the United States. President Ford has recently said he supports providing federal financial backing to provide facilities for our athletes. With high quality facilities our athletes could be closer to equal competitive conditions. The money would not go directly to the athletes, but they would be the beneficiaries of the support. Contributions from the citizens could still provide the major support for our international sporting events. The question of how the athletes/coaches are to live would still have to be dealt with but the democratic system should be able to meet the international standards of sports competition.

Kropke in *Quest* stated that one proposition differentiates East and West:

> "...the communist countries utilize sport as a social control, to channel activity to party goals, while the West, and especially the US, has a casual 'athletic approach,' a naive outlook toward the significance of East-West sport competition and their political implications." (5)

It seems that the reality of the importance of sport to international relationships cannot be ignored. We, as physical educators, may not agree with this aspect but we can no longer ignore the reality of the situation. As professionals we must now open our eyes to sport as an undeniable influence on political ideology, as well as to sport as a medium for recreational and educational goals of physical activity and human movement.

Whitehead in a citation by Morford defines the term "profession" and goes on to say that, "The antithesis to a profession is an avocation based upon customary activities and modified by the trial and error of the individual. Such an avocation is a craft...". (9) The teaching of physical education in its present form must then be classified as a craft by this definition. What must we as craftsmen change in order to fit the definition of a profession? Whitehead's definition of a profession was, "...an avocation whose activities are subjected to theoretical analysis, and are modified by theoretical conclusions derived from this analysis." (9) Morford concluded that, "The few individuals who express interest in the phenomena of physical activities of man either as ends in themselves or for purposes of physical education theory building are regarded by many of their professional peers as 'black sheep' and that this is a mistaken and myopic view." He further concluded that, "...a theoretical framework is a necessity forming the very basis of professional authentication." (9)

The lack of a commitment of physical educators to become more of a profession and

utilize theoretical considerations is not just a topic for professional or philosophical debate. It is a non-supportive behavior that must be eliminated, not for our benefit which would then allow us to take on the characteristics of a profession, but for the benefit of our students and athletes. Ariel in 1974 stated that, "Physical education is the only discipline whose goals and objectives are met with improvement of tools. In other words, in order to improve biological efficiency, we improve the means, i.e., the activity itself." (1) But we improve the activity from a trial and error modification approach.

The areas of research in human movement include exercise physiology, subcellular exercise physiology, motor integration or sensorimotor development and biomechanics. These areas of research have reached a state of sophistication where the knowledge now available is being directed toward performance optimization and simulation. Researchers in subcellular exercise physiology now have the ability and capabilities to look at muscle fiber types and determine the type of speed or strength related activities best suited to the athlete. Researchers in biomechanics now have the ability and capability to determine body position at time intervals of thousandths of a second while at the same time determining force and torque. Researchers in motor integration and sensorimotor development look at firing patterns of muscle fibers relative to speed and strength activities. Working together in an exercise science broad based approach with exercise physiologists who can investigate oxygen consumption capacities, many facets of human performance can be integrated to provide a physical profile of any one person or group of people.

The Communist countries utilize such scientific methods to improve the performance levels of their athletes. Rogoskin of the Leningrad Research Institute of Physical Culture said in Dallas that, "Russian success has no specific secret,...but the main reason is our system of preparation — many scientists are researching it to improve it," and, "...because it is scientifically oriented." (3) *Reader's Digest* in October of 1975 printed an article by the Australian runner Ron Clarke with Alan Trengove which discussed how, "...today's science can give athletes the extra edge." (2) The article was of special interest to me as an exercise scientist since he specifically pointed out the exercise science approach of the University of Massachusetts. But there are other research centers in this country that are investigating human performance in a similar manner. Cooper's Aerobic Center in Dallas was the focal point of an article in *Sports Illustrated* in May, 1976. The article by Kenny Moore related the details of a week long investigation of twenty world class runners by a team of scientists. (7) The researchers were attempting to obtain a psychological and physiological profile of these runners in order to gain new knowledge and synthesize the old and new information to provide a model for high level performance. As craftsmen we have the knowledge to provide human movement theories and utilize these theories to teach our activities and therefore become professionals within an accepted profession.

But even if the knowledge and methodology exist, and they do, we do not meet the definition of a profession unless we utilize the knowledge to teach the activities. Kenyon, as cited by Siedentop, discussed the on going debate concerning physical education as a profession or a discipline and said, "...This general understanding implies that the discipline would provide scholarly input for the profession and the profession would use this knowledge to train teachers." (10) However, the profession is not even using this knowledge to train teachers, much less using this knowledge to teach activities. As you sit there, you may be thinking, "we do use a theoretical approach." And you are right, most majors take courses in both of these areas — but what is the carry over level for our majors when they become professional physical educators in the field? Can these physical educators we train utilize more than the obvious theoretical considerations when teaching in the public schools? Can they, for example, teach tennis skills utilizing concepts such as the center of percussion of a racket, explaining to their students that a ball impacting at any point other than the center of percussion will result in racket rotation at contact and that this racket rotation will necessitate the production of additional muscular force by the student at impact or else the ball will fly into the next court? Can students improve their tennis game by retrieving the ball from the next court? I think not. We, as part of the teacher training system, must reach out to the majors and not only teach them skills and theories but we must also teach skills by employing scientific theories. Not just the obvious theories, but all related theories, for how can you expect your students to do something that you can't or don't do?

When our newly graduated professionals begin their teaching careers they will be

prepared to teach activities based upon sound theoretical principles. Elementary physical education could take the form of movement exploration providing the opportunity for each child to learn how his body works and why. High school physical education could then carry on delving more deeply into theoretical concepts underlying skill activities and thus increase the performance level of each student. The performance level must be increased as it directly relates to the physiological and psychological potential of each individual. The high school program could incorporate a testing program to determine the profile of each student. The data obtained through this profile could then be used to evaluate performance levels, performance potentials, and performance improvement. The data would provide for truly individualized attention. No student would be punished for failure in a skill or activity which is physically impossible in terms of his physiological and psychological capabilities. No student would be forced to face possible injury from attempting a skill or activity due to a lack of knowledge of his own capabilities. Skills could be taught to each student based upon knowing how a skill is theoretically and optimally performed, what the student's profile is, and what each student must then do relative to his profile to get as close to the optimum performance as possible. This teaching approach could also be utilized in the college general physical education program. The age level of the student is unimportant; the vital issue is that we as professionals are obligated to increase the human movement potential of our students through the medium of physical education.

This proposed physical education program is almost feasible if the profession simply initiates the necessary changes in the teacher training curriculum. "Almost feasible," means that one additional aspect of the discipline versus the profession or research versus the profession debate must be resolved first. Larry Locke in his monograph on physical education introduced the thought that a "middle-man" must be developed to disseminate research knowledge to the professional in the field. (6) Siedentop in discussing this research to profession relationship states:

> "Unfortunately, although this makes a tidy package of relationships, education has never fared well in translating theory into practice. More explicitly, only miniscule enthusiasm and resources have been generated for the support of development and dissemination activities directed at professional applications of knowledge. Research development procedures, so familiar in the industrial context, seem perpetually to fall between the tools of professional practice and academic discipline—leaving an unabridged gap to haunt those who envision teaching strategies as the proper and logical extension of a scientific knowledge base." (10)

The "middle-man" should be developed and trained to be able to disseminate new research information as well as to be able to serve as a consultant for the profile testing of our students and athletes. The average professional should not be required to attempt the testing without the consultant service. Nor should a school district be required to obtain the expensive equipment necessary to obtain the profile. The "middle-man" role may best be provided by a consultant service administered by one of the established professional organizations or by a government educational agency.

With training in the theoretical approach to teaching activities and with the aid of specially trained middle-men, professionals can improve the physical performance level of our students in all aspects of human movement. Elementary children will learn by exploration what their bodies can do; adolescents and teenagers will be tested and a physiological and psychological profile developed and when the students are exposed to the various activities in a physical education program they will be informed of their potential and how best to obtain the greatest success based upon their own capabilities and theoretical knowledge. The goal will be to provide the best means for each student to perform and move at his peak level no matter what the activity. The use of theoretical knowledge will help achieve this goal.

The preceeding discussion of the present research capabilities and obligations of the profession to improve human performance referred to athletes and super athletes only briefly. A further discussion of what research can do for or to the super athlete is now in order. The super athlete is in the best position in many cases to be helped by the knowledge obtained through research. In competition, where winning or losing can be determined by as little as one thousandth of a second or a single centimeter, research can make the difference. Valery Borzov was selected in early 1970 to train as a potential Olympic sprinter. A

comprehensive physiological profile was developed, his sprinting was analyzed biomechanically with the aid of a computer, his training schedule was determined and then monitored by a computer and in Munich in 1972, Borzov won both the 100 and 200 meter sprints. Clarke and Trengove reported that Borzov's coach said, "To turn Borzov into a ten-second sprinter was the work of a whole team of scientists, not unlike the mathematical design of a car or airplane." (2) They also cited a Soviet minister who reported that, "They are working with two and three year olds. The aim is to inculcate the sporting culture in them so that the drive for sports becomes something organic that is beyond their control."

The super athletes in the United States have this same desire to compete and to win. As professionals, we are obligated to support these super athletes and thus to help them reach their goal. The necessity for our support is really independent of the issues of nationalism in international competition or even the values of the athletes regarding sport and winning in contrast to competition for the joy of competition. If the athlete wants to win, we must provide the means to win and along the way remember that the joy of competition is still important. For where is the idealistic joy of competition when there is no real competition available because some of the competitors are so superior. Our profession then must equalize the training factors in order to insure competition for our athletes that is based upon the same quality foundations as athletes from other countries. For many athletes, winning or success is a means to obtain social and economical security and advancement. For others, sport provides the opportunity to test their capabilities and search for their limitations. It is not within our rights to judge the value hierarchy of these athletes, but it is our obligation to teach and coach so that athletes can find their limitations and experience success concommittantly.

Research methodology has made available the knowledge to equalize competition relative to scientific training methods. This equalized scientific base then returns sports to the realm where athletes are defeated by superior athletes: not by lack of superior training techniques or by a lack of supportive behavior from the people who should have helped the athletes reach their optimum performance level.

Research methodology has something further to offer. The same methodology that can provide information to improve performance, can also provide a means for selecting the person best suited for success in a particular event. The physiological and psychological profile developed for athletes could serve to channel the best performers into a specific activity. It is obvious that many people in this world are not physically capable of achieving great success in specific sports activities. According to Moore, the team of researchers at the Aerobic Center found that several of the world class runners have the muscle fiber types best suited for their event. Garry Tuttle has 98% slow twitch muscle fibers; Jeff Galloway has 96% slow twitch muscle fibers and both compete in long distance events requiring endurance. On the other side, Steve Prefontaine had only 79% slow twitch fibers and experienced great success in the mile event which requires great speed. (7) These athletes experienced success because of their physiological and psychological make-up. Success fosters the desire to continue training and experience even greater success. But there are potential athletes in our system who for some reason have started to work in the sport where their physiological profile limits their optimum level of performance. Research can now test these athletes and guide them into the best sport. A potential athlete with 98% slow twitch fibers should not spend years training for "Olympic gold" in the 100 meter sprint. This athlete should be competing in long distance events and experiencing success instead of the frustration of losing.

We are obligated to develop these profiles, inform the athletes of their profiles and potential success areas. The athletes are then provided with the information necessary to make decisions based upon needs and desires. One athlete may be so success oriented that the sport or event makes little difference to his intense need to experience the greatest possible success. Another athlete may also be success oriented but the event or sport does make a difference. The athlete must decide, but we as professionals and researchers must provide the athlete with the evidence on which to make the decision. In addition, the athlete must then be given all the sound scientific training available, no matter what his decision or the fact that he may choose to ignore the possibility of experiencing greater success in a different activity.

My intentions up to this point in this presentation were to present you with some factors relative to the importance of sport, the need to use biomechanics and other theoretical

aspects of our discipline in teacher training as well as in the teaching of students and athletes to use their bodies in the most optimum manner. It was not my intent to discuss the moral issues or questions that these factors could produce. The reason for this omission is that with but one exception there should not be any moral issues involved. The exception is that we have a moral right and obligation to our students and athletes to help them attain their highest possible level of performance. And the profession is not meeting this obligation. There is no question whether we should use science to improve performance for that is why the profession exists. There is no doubt even that we should strive to equalize the competition by improving our teaching and training techniques, for we cannot require or expect other countries to decrease the quality of their programs. But additional moral and ethical questions do arise. It is my opinion that the occasions and situations where these moral questions arise are those times when mankind or each of us as human beings fails. As long as each of us does not succumb to the pressure of winning at any cost, these moral questions could not reach a state of conscious concern. However, we know that human beings are not always totally moral or ethical and that people in the sport profession are not exceptions to that generalization. For that reason it seems imperative that the profession should examine the conditions where unethical and immoral behaviors may develop.

The first issue that may arise takes this form: Should we test and develop athletes solely because the iron curtain countries do so? The answer is, "of course not." No one should ever do something merely because everyone else does it. But we should do it because it is the right thing to do for those concerned. The values held by our athletes relative to the importance of winning have been developed by society and our culture. The values exist and we must face the reality of their existance. If the athlete is willing to work and train for hours every day for years in order to win an Olympic gold medal, then it matters greatly that Russia uses superior scientific methods to help her athletes reach that goal. For no matter of how little importance it is to some of us that the Russians are trying to prove their ideological superiority, it is important to our athletes. The use of research knowledge and scientific methodology becomes a moral obligation of the physical education profession and discipline.

The second moral issue is that perhaps too much emphasis is put on winning in general and winning to prove ideological superiority specifically. The probability is that this is true. Sport should be a means to express inner thoughts, feelings and emotions. Sport should be a means to test one's own capabilities or search for one's own limitations. Sport should be fun. Sport should provide a means to experience the joy of competition, the thrill of victory and yes, even the agony of defeat. Sport should be a means to develop the body that houses the inner being and to strengthen the walls of that structure. Sport should be all of these things, and it is. But the human beings who claim sport to be their profession and medium to provide these opportunities for other people, fail to remember the things sport should be. And those of us who remember them do not always live them nor do we pass them on to others. This IS immoral.

A third moral issue relates to a misuse of the physiological and psychological profiles. If the information provided from the profile is used to force people or to inculcate in people knowledge of only a single event or sport, then this too is immoral. This is true especially for young people. Our obligation is to provide the ways, means and opportunities for the young child to develop fully and to learn what he/she individually can do. Our obligation to youth and young adults is to expose them to many activities and improve their performances to the highest level possible. Our obligation to all students and athletes is to inform them of their potential and then to help them get there. Our obligation is NOT to make the choice for them or to force them into thinking it is the only possible choice available, for therein lies the potential unethical behavior of our profession.

A fourth point or issue is best illustrated by the title of Clarke and Trengove's article in *Readers Digest*. It was entitled: "Are We Creating Super Athletes — or Monsters?" (2) We have no right to create "monsters" but we have the obligation to develop super athletes who can feel proud of their ability, win or lose, in any field of competition. How do we prevent the possibility of creating monsters? By insuring that the right to choose belongs to the individual athlete and by insuring that the concept of sports monsters is eliminated from all sport related aspects of society.

This is not easy to do although it is easy to say. Human beings may be inately good, but they do have failings. And it is these failings that will bring immoral and unethical behaviors

related to the teaching and training of students and athletes. But if we as professionals do not allow ourselves or our colleagues to fall down in our obligations, then the moral issues and questions will be resolved by preventing their occurance in the first place.

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Interstellar Relationships

A WIDER VIEW

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Most of us have come a long way to attend this conference. Before I left Florida, someone asked why I would travel across the whole United States, from its southeast to its northwest corner, just to spend four and one-half days at a Conference. My answer was quite simple:

"NAPECW's Asilomar program is one of the greatest and the opportunity to be a part of it was irresistible."

The lines from a popular song, "MacArthur Park," come to mind.... where the cake was left out in the rain, and where the lyricist attempted to explain why he could never produce another such cake. He said: "I don't think I can take it. It took too long to bake it. And I'll never have that recipe again."

Metaphorically, every "recipe" is a chance and a challenge. An opportunity that comes once and only once. Probably, I'll never have another opportunity to be a part of a NAPECW program or to select the stellar speakers, both of whom had to travel thousands of miles to get here. This is a unique, international "recipe" that we shall never have again. It is the first truly, world-wide interstellar session in NAPECW's history.

As an organization and as individuals, we are all aware that the most volatile force in the world today is change.....rapid change! So it's our responsibility to educate for change.....to prepare minds and bodies for the constant transformation in our society that takes place on every continent.

It is important that our students be made aware of the harsh realities of international affairs, and of the problems produced by conflicting ideologies which confront our profession.

This is needed throughout the world — a world in which nations and people are becoming more inter-dependent and in which they are being thrust daily into ever closer relationships. For us of the NAPECW, conflicting standards and objectives come along with our daily bread as we become involved with global competitive sports and other related competitions.

We must develop a *wider* view.....a *world* view in our students. Why is this necessary? Let me illustrate. A teacher held a large sheet of white paper with a black spot on it before her class. She asked the students what they saw. Without exception, they all said, "A black spot." Not one person took note of the large sheet of white paper.

Mankind has a tendancy to focus on spots. So we focus on spots, and *miss* the whole picture. History records our failures, and we must try to shake our students from this same error by freeing them from self-imposed limitations to a view that includes the whole

world ... its aspects and its problems.

The emergence of sports through the ages from a religious ceremony to its influential position in our world today is both heartening and challenging. Clearly, millions of youth on every continent agree that the good life is possible only with a body that moves skilfully guided by a mind that seeks excellence. Unhappily, individuals and nations would manipulate this drive of our young people.

Sports activity is a blessing. Sports as a political tool is a curse. Historically, this last subject has been beyond the influence of our profession. Our challenge has been to give all children an opportunity of participating in any sport at any level for which they are qualified. Saying it another way, our challenge is to give every individual an opportunity to develop his potential with satisfaction.

The question, I ask you to consider is: *What can and what should the NCPEAM and the NAPECW do to meet this challenge?*

SPORT AND WORLD SOCIETY
SOME ASPECTS AND PROBLEMS

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> The historian ... is apt to forget that sport in some form or other is the main object of most lives, that most men work in order to play, and that games which bulk so largely in the life of the individual cannot be neglected in studying the life of the nation.
>
> Sir Arnold Lunn.

I was invited to speak today on "Sport and World Society" — a most challenging and timely theme. Indeed, the subject is of such wide scope that I cannot do it justice in this address.

Sport – how many interpretations, how many concepts are possible from that single word? *World Society* — this phrase encompasses nations, peoples, cultures, philosophy, anthropology, politics, economics, commerce, thought, opinion — from the individual's opinion to the societal or national opinion.

I have travelled extensively, taught in 4 universities in 4 different countries, have been privileged to have performed, and coached, at the international level.

All my life I have studied and participated in the areas loosely termed "sports" and "physical education" knowing that just as the physical and mental aspects of an individual are indivisible, so should the experience, education, growth and development of that individual proceed throughout life in those indivisibles — the physical and the mental.

I speak to you only from the bases of my experience, studies, reading and research. I hope

to leave you with much to think about, and even more to do.

As I am not a Sports Sociologist, nor have studied specifically the Sociology of Sport, I must clarify my own definitions for the purpose of this paper.

Generally speaking *Sport* means "to play"; and *Society* is "a body of individuals living as members of a community"; *World*, "the earth and its inhabitants". However, in the context of the title I believe the organisers of this Conference had a very different object in mind: that of Sport and its influence upon Society, and vice versa. In this sense, then, *Society* is a definitive term suggesting activities, social relationships, strata, organizations subject to the influences of politics, literacy, science, patriotism and internationalism.

Sport, to one social group, is not what it seems to be to another. Here is an immediate warning; one *must* not, *can* not, *should* not, judge either Sport, or another Society from a limited personal knowledge and viewpoint.

Thus, in the context of this discourse, I regard:

> *Sport* as physical activity, organised, longterm, individual or community/social, demanding personal committment with intrinsic values, and *with a history*, and *a future*.
>
> *World Society* as political, economic, racial, religious, philosophical, strategic, climatic, communicative, cultural, also *with a history*, and *a future*.

An Ancient Concept

In Plato's theory of sport the elements of strenuousness and self-discipline dominated all others. How lofty was Plato's conception of sport and how great was its value in his scheme of morals and politics. It was difficult indeed to adhere to his discipline of mind and body. Judged by his standard, much of what is called sport today would be condemned as spurious.

Plato, in his last dialogue, *Book of Laws*, written about 340 B.C. addressed some remarks on the various forms of sport to young men:

> I hope no yearning, no passion, for sea-fishing or angling will ever get hold of you, nor any pursuit of water animals nor the idle sport of setting day and night weels — Alone, and surpassing all, stands the pursuit of wild animals with horse and hound by the hunter in person. By racing, fighting, slinging and chasing, in personal encounter, those prevail who have at heart the ideal of manhood.

Plato's preference for the endurance/survival/encounter sport persisted throughout many ages. Vegetius wrote in A.D. 400, in the *Art of War*, "I hold that anglers and fowlers must not be allowed anywhere near a training camp but hunters of stags and wild boars will be welcome recruits".

King Edward III, during his wars in France, kept 60 couples of staghounds and 60 pairs of harriers so that his officers and men could run, chase and maintain fitness for fighting. The Duke of Wellington kept a pack of foxhounds for the same reason.

Sallust, the Roman Historian, in his *Bellum Catilinae*, published in 45 B.C., echoes Plato, saying: "I have no great admiration for mere athletic training or muscular prowess; but a man whose mind has sovereign control over his body neither weakened by self-indulgence nor debased by wealth or sloth and luxury may take his sport on the mountain, or on the sea, and I will admire his body rejoicing in hard work and his limbs growing under his toil".

And Sallust is correct in stressing that enjoyment is the essence of *SPORT*.

The Greeks, masters of every form of art and literature were also masters of the essence of sport. They are entitled to the honour of having found the most attractive and genuine formula for sport — sport for the harmony of the human machine, for the smooth balance of body and mind, for the utter joy of feeling oneself intensely alive, well and functioning fully.

The ancient Olympic Games, for 1,168 years the greatest continuing festival of sport recorded, were developed and sustained through a philosophy linked with the worship of the Greek gods who were idealised athletes excelling in their godlike games and sports. The Greeks brought their gods down from the skies into the everyday life of sports (and war, and other activities) — and the human athletes strove to excel, to achieve victory; the outstanding athletes became national heroes.

We should consider here; is not that last phrase pertinent — now! The outstanding

1.0
1.1
1.25
1.4
1.6
2.2
2.0
1.8

athletes became national heroes.

Throughout history, sport and religion, sport and worship, have intermingled in a very practical way. For centuries in pre-Reformation England, when the church had great influence over the amusements and leisure of the populace, the parish churchyard was the public playground on Sundays and Holy Days, and after Matins and Mass. The rest of the day was spent in games and revelries. Foot-the-ball, field hockey, singlestick and quarter-staff were the recognised winter games; in summer foot-racing, leaping, nine-pins, wrestling, long and crossbow shooting and, always, hobby-horse and Morris dancing were associated with religious celebrations.

Church ale was also made, and then sold, the profits were for "repairing the church and helping the poor".

By the *13th Century* it was necessary to ban from the church grounds wrestling "and all such sports, games and dances as engendered lasciviousness".

In *1472*, Wrestling, Football and Handball were forbidden under penalty of "twopence forfeit". In *1542*, Bonner, the Bishop of London banned all sports from church precincts and in *1600* the puritan clergy were vehemently opposed to Sunday sporting activities. In fact, an inscription on a stone as part of a stile leading to the churchyard at Llanfihangel Discoed in Monmouthshire reads:

"Ye that come here on Sunday
To practice playing ball
Take care that before Monday
The devil won't have you all."

Then in *1618* came the Declaration of Protestant King James I, permitting Sunday indulgence in lawful sports such as "Dauncing either of men or women, Archery for men, Leaping, Vaulting and other such blameless Recreation" and the "having of May-Games, Whitsun Ales, Morris-dances".

This was a remarkable piece of legislation using sport to rebuke the Puritans and to sway the masses from Catholicism to Protestantism. Charles I appended a further declaration in *1633* allowing freedom for "..... all manlike and lawfull exercises". In 1644 however Charles's *BOOK OF SPORTS* was banned by the Puritan Parliament which ordered all copies to be collected and burned.

It was only under Good Queen Bess that "Merrie England" became sportsfree once more:

"When Tom came home from Labour
And Cis from milking rose,
Merrily went the tabor
And nimbly went their toes".

Sport in society has always been a potent force. Theodosius II, in *392 A.D.* banned the Olympic Games, because of their deterioration through exploitation and professionalism. Richard II, in *1389* banned soccer as it took too much practice-time from archery. Theodore Roosevelt was prepared to ban Rugby in *1905* unless the rules of "the brutal game" were changed.

Sport is inter-related with Man and his society

Frederick W. Hackwood wrote in his book *"Old English Sports"* published in 1907:-

> "The sports of the people afford an index to the character of the nation. They show how the people have met the stress and the exigencies of life by varying their pursuits during those hours of leisure stolen from the more serious efforts of bread-winning; how they have taken advantage of their climatic and other physical environment for the purposes of recreation; what progress they have made along the paths of civilization towards culture and moral refinement; and, generally it may be accepted that temperamental qualities of a people not infrequently manifest themselves in the outlets they seek for their super-abundant energies".

Sport has always been used to whip the imagination and firm the resolve:-

Harrow's "Forty Years On" cries out:-

"God give us bases to guard or beleaguer

Games to play out, whether earnest or fun;
Fights for the fearless and goals for the eager
Twenty and thirty and forty years on".

and *Henry Newboult's*-

"To set the cause above renown,
To love the game beyond the prize,
To honour, while you strike him down
The foe that comes with fearless eyes".

John Galsworthy confirmed this with:-

> "Sport, which still keeps the flag of idealism flying, is perhaps the most saving grace in the world at the moment with its spirit of rules kept, and regard for the adversary whether the fight is going for or against. When, if ever, the fair play spirit of sport reigns over international affairs, the cat force which rules there will slink away and human life emerge for the first time from the jungle".

In the present social, political and economic climate this appears to be the impossible dream.

When we consider sport and world society we must consider sports' motives. These are many, and include: the mechanism evolved for action survival, latent adversary instincts, adventure, distinction, economic gain, leisure filling, relaxation, distraction, play instincts, physical improvement, gregariousness, social pressure, release of tensions, physical preparedness, physical excellence and discipline.

Note the motives cited by these famous and articulate men in the way they express sport:

F. L. Paxson, the American historian, called it "the social safety valve that replaced the frontier", but *Thorstein Veblen* wrote — "sport is no more than an expression of the barbarian temperament". *Albert Parry*, in the Encyclopedia of the Social Sciences, termed sport:- "an instrument with which the masses are to be kept in check, awed or distracted", and he continued....."The wide interest of Anglo-Saxon masses in horse racing, football, baseball, and similar sports, tends to allay social unrest and lessens the possibility of political uprisings". At the International Olympic Academy, in his speech "Modern Training Theory", presented in July 1962, the late *Carl Diem* stated:

> "Sport is a physical exercise under mental control. By Sport we mean a game which we take seriously, enjoy, govern with strict rules, and in which we strive for top performance".

Sport is involved in Politics, and Politics manipulates Sport

Rhodesia last competed in the 1964 Olympic Games, was not invited in 1968 and ousted in 1972, despite her fully representative team.

The late Avery Brundage stated his upset in Munich:

> "For the first time in 20 years the International Olympic Committee refused to accept my recommendations and succumbed to political pressures".

You will remember that 15 nations of the 123 invited to compete in Munich threatened to "walk out" if Rhodesia competed — the I.O.C. vote was 36 - 31. The conditions set by the I.O.C. for Rhodesia's participation were:

1) Rhodesia must field black athletes
2) Compete under its old name of Southern Rhodesia
3) That it must carry and fly the Union Jack
4) Sing "God Save the Queen" after any Rhodesian victory.

Yet Rule No. 1 of the Olympic Constitution reads:-

> The Olympic Games are held every four years. They assemble amateurs of all nations in fair and equal competition. No discrimination is allowed against any country or person on grounds of race, religion or political affiliation.

And now, at the time of writing, an article in the Toronto Globe and Mail of 9th March, 1976, states:- "Africa and friends of Africa will boycott the Olympic Games if New Zealand competes while persisting in its "support for racist South Africa", according to Abraham Ordia, President of the Supreme Council for Sport in Africa".

B. E. Talboys, Minister of Foreign Affairs for New Zealand answered on 16th March:- "..... We believe also that sportsmen and sporting organizations in New Zealand should be free to associate with those in other countries if they wish to do so, regardless of race, color, creed or internal politics. Sportsmen have the same rights as other New Zealanders and this Government intends to uphold them. There will be no more political interference in sport ....."

The Republic of South Africa withdrew itself in 1961 from the Commonwealth of Nations, was cast out of Olympic Competition in 1964, is unacceptable to other African nations for Pan-African competition and now is internationally banned from team competitions with other countries, yet, in 1970 the Rugby Football series was played in South Africa with New Zealand; in December of that year the South African Track and Field athletics team brought back 17 gold medals from the Pierre de Coubertin Games. Argentine's University Soccer team played in South Africa, and the Cricket tour of Great Britain was at the last moment cancelled. But the bans are having their effects where delegations and Ambassadors have failed — sport is the instrument by which apartheid is challenged and being changed. The South African Games are held annually, great sports festivals (this year, 1976, it is to be a mammoth Gymnastics Festival) are to be held regularly, incentives are high, tours will be encouraged internally and for whomever will visit, or invite South African individuals. The need for international competition is fully understood — not for the participants solely, but for white South Africa. *Sport* then is important *as a tool*.

By being debarred from the Olympics by the I.O.C. (a Sports body) South Africa's political and ethical attitudes were bared. *Sport* was used *as a weapon*.

The black African within the Republic still dances, uses stickfights as a proof of manhood, and is playing soccer, rugby football, tennis, cricket, and performing the multitude of track and field athletics events as well as boxing. In fact the Open South African record for 880 yards is still held by Humphrey Khosi. I have coached six South African Bantu (Blacks) who have represented South Africa in London. In the non-white Games there were 4,500 participants in 14 different sports at the Orlando Stadium in August 1975. Judo and Karate claimed many entries. Boxing, walking, tennis, cycling, soccer, and rugby were others. Which of these activities is ethnic?

When Jan van Riebeck landed at the Cape of Storms in 1652 — which games did he bring with him and what sports did his 116 Dutch men and Malay slaves contribute?

In South Africa there is now a professional Soccer League — about English League II standard — but apart from soccer, golf and tennis professionals, virtually no-one plays for pay. Why do South Africans play — there's lots of leisure, lots of sun, lots of tradition. School physical education works in the gymnasia to produce all-round strong and mobile bodies to express themselves through afternoon and club played games. But I identify more than that — not identified by the white South African at all — *I see it as fear*. By isolation one would assume that — if sport is a cultural outlet — physical activity would be curtailed. By observation the opposite is the effect.

Why should the University of Stellenbosch with only 6000 students have to increase the number of its 66 Rugby teams to 82 (1232 players) in 1976; why should athletics scholarships raise their ugly heads in South Africa — to beat one's own? Incentives are vital, but incentives are personal. One's own "Olympic Team" might be achieved by playing for the 78th Rugby Team — there is great joy in playing — even badly.

One of the saddest and most incomprehensible uses of political power is the Canadian Government's pressure, based upon its *United* Nations stance, for the exclusion of a multi-racial South African paraplegic team from the 1976 Para-Olympics scheduled to be held in August in Etobicoke, Ontario. The threat: forfeit $500,000 in federal funds plus $1-million contingent provincial grant if the South Africans compete. The losers (whichever choice is made): 1,700 disabled participants, including Canada's 88, and 22 South Africans. This denial to those, already denied much, to whom training (and re-learning)has become epitomised in "Sport", is positively cruel.

On new year's eve 1975 the presence of Titus Mamabola, the first South African to be invited to participate in the annual road race in Sao Paolo, Brazil, caused a political storm when the all black team representing Kenya was instructed to withdraw because of Mamabola's presence. Sport, again, was being used to focus a political light even though *all* the athletes were dark.

The performance of the Kenyan men's field hockey team in the 1972 Olympics, Africa's first sub-4-minute miler Kipchoge Keino, Wilson Kiprugut Chuma, Seraphino Antro, Amos Biwott, Temu, Koga — have all put Kenya "on the map". Would the world have known as much of Kenya had it not been for the athletic successes of her sons? Who would have opened more than a school atlas had it not been for the late Abebe Bikila and Wolde to find out about Ethiopia, the 7'1½" high jump by Minister of Sport, Idriss of Chad in 1964, for the efforts of the Tunisian 10,000 metres runner Gammoudi or Akii-Bua of Uganda?

Sport projects *a national image* too.

Look again at Canada — who, because she can't win any more in amateur international ice hockey has withdrawn from the Winter Olympics in that event. But how we think of Canada's attitude, and of Kenya's national attitude to sport is probably rather different. And, another viewpoint, can you conceive of anything more ridiculous than to have the *World Series* — of baseball, and the *World Champions* — of American Football? Especially when no one else is invited.

How does one feel when the announcer at the Super Bowl final declares "Ladies and Gentlemen, 64 million viewers will be watching this game to-day, it is no more a spectacle, it is a happening — a part of the American way of life", and on the field 22 players fumble their very human way attempting to get a tiny ball over a white line. Perspective once more!

How does one feel when an ex-vice President of the United States is reported in the Congressional Record as follows on 12th September, 1962: "The Soviet Union uses competitive sports for many purposes, not the least of which is prestige — individual and national prestige", "...the United States must make an all-out effort to prepare for the Olympics if we expect to avoid being clobbered by the Soviets", and "Mr. President, in my view the United States must not lose a day in preparing to win the 1964 Olympics". But no nation *WINS* an Olympic Games.

Baron Pierre de Coubertin believed the solution to moral decadence lay in the development of the individual as he wrote: — "The foundation of real human morality lies in mutual respect — and to respect one another it is necessary to know one another."

The late Avery Brundage, that last human bastion of amateurism, stated, not long before he died — "The ancient Greeks used to stop fighting to stage the Games — now we stop the Games to stage our wars", and, "However, people of all nations will turn to the high ideals of amateurism and away from the tragedies of war".

But Paul Gallico wrote "... Brundage suffers from the dangerous illusion that public competition on the athletic field engenders good sportsmanship, makes nations love one another and is good for peace". "... It is nothing of the kind. It's the finest stewpot for cooking up international hates between wars, and keeping them alive, next to a round-table gathering of diplomats".

See an ice hockey match, watch the fights, observe the "no body contact" game basketball; lots of "character" is shown — often bad character. Games and sports bring out what is there. They do *not* "make" character. Drs. Ogilvie and Tutko agree that competition can bring out the best in people, but point out that it also brings out the worst. We happily remember a pleasant incident but unpleasant ones become too numerous to relate.

The competitor is usually well-motivated, dedicated, self-demanding and self-sacrificing in terms of time and hard work. But the various systems which "use" the competitor are open to question — many questions. Also the systems within which an athlete competes and/or plays must inevitably influence the participants.

Sport as Entertainment, Profession, Business

That sport is all these is fact. Spectator sport is excellent entertainment, professional sport is usually very financially rewarding, even more so may be investment in sports franchises and the like. There is nothing intrinsically wrong with any of this, other than the obvious anomalies, imbalances, and frequently apparently limitless financial settlements.

In the decades to come I believe the average professional sportsman or woman will be no better and no less rewarded than the average performer in any of the performing arts — the "greats" will still achieve stardom but there are many potential greats pressing on their heels — and the professional sportsman/woman — athlete — performer is generally limited by one inexorable fact — age.

In the context of world society, frankly professional sport (tennis, golf, track & field,

ice-skating, to name but a few) is no problem. The aspect that bears watching, and needs regulating, is the professionalism of so-called "amateur" teams and individuals, when in amateur competition with genuine amateurs. Professional full-time, life-long training of "amateurs" has been mentioned already in relation to sport in politics.

We know how games and sports start — why we indulge in them initially. Each of us knows why he or she played — or plays — games and sports. Without exception, we play, or played, because we like or liked to do so — there is, there was, no ulterior motive — it was fun. We had no *need* to play, except the biological *need* to move and we fashioned activity to suit the mood and urgency of our need. We invented games, copied activities, indulged in them because they and we were there. But what have games and sport become?

In the main, at the highest echelon, the professional makes them into lucrative work, and the politician gets a lot of mileage from them.

Different Systems and Sports Attitudes

In 1948 *Soviet athletes* were unknown quantities; in 1956 and 1960 they burst upon the sports world in ice hockey, track and field athletics and gymnastics. In the '70's Olga Korbut became the darling of the United States through television. Today it is Nadia Comaneci of Romania. Soviet coaches are now welcomed all over the globe except to mainland China and the supreme Russian triumph will be the celebration of the Olympic Games in Moscow in 1980.

East Germany and its ideologies are thrust, by exquisitely trained athletes, sparklingly clad, in sports of all seasons, upon a reeling world, not quite ready for such excellence. *Hungary* has its whole educational system geared to participation by youth and its early — almost Spartan — selection for élite coaching. To quote Mihaly Kocsis — Director of the General Sports School.

> "The Sports School does not conceal its aim which is to raise efficient competitive sportsmen. It selects its pupils, it has a rational curriculum and it works with the most up-to-date methods adjusted to the requirements of the different age groups. The school raises an elite, and it follows two purposes; a direct and an indirect one. It develops the abilities of gifted pupils, and through this elite it wants to attract other young people and arouse their attention and interest for sport and physical education.
>
> The best encouragement, apart from facilities, is the success of others."

An evaluation of sport based upon accumulation of Olympic medals confirms his view.

Medal Winners in Three Olympic Games

Country	1952	1956	1960	Population
Indonesia	0	0	0	87,800,000
U.A.R.	3	0	4	29,000,000
Australia	11	35	22	10,050,000
Hungary	42	26	21	9,940,000
Finland	19	15	5	4,435,000

Sport and Youth

This is the theme for the 16th Session of the International Olympic Academy to be held just prior to the Montréal Games and speakers, (I am to be one), will explore what young people expect from sport today. Obviously a survey of their opinions will disclose many expectations, varying from "nothing" to "it's part of my life". It is a fact that *many* of North America's youth expects gain, not merely participation.

A headline in the Toronto Globe and Mail of 22nd March, 1976 indicates today's youngsters may get "signing bonuses" of skates and/or three-speed bicycles for agreeing to play ice hockey for a specific minor league team. And this is for 8 and 9 year-old boys of the Metro Toronto Hockey League.

17 boys in 1975 were offered similar inducements to join one particular Minor Atom "B" team in the MTHL. There are 3 grades of Minor Atom teams from AA down to B.

The mother of one of the boys who accepted skates is quoted as saying, "I do not enjoy going to minor hockey games any more because the fans act so badly." She recalled one game when a man stood up and yelled obscenities at the referee and threatened to kill him, illustrating this by wrapping his hands around his own neck. "It's beyond me how people can get so upset about 9-year-olds trying to have fun," she observed.

When asked to comment on the report of signing bonuses for Minor Atom Players, William McMurtry, author of the 1974 report on violence in amateur sport in Ontario, said "I think it's a terrible thing, it destroys a child's perspective of sport, it's usually done by non-achievers in athletics on vicarious ego trips".

That is a most interesting statement because it shows clearly our failure in creating satisfying situations in sport in early life which would allow for "non-achievers". All children should be enabled to achieve, to each individual's satisfaction and potential, at whatever level. I repeat — there is joy in being able to participate — however badly.

Time has run out. I had wished to talk of the attitude towards women's sport in India; Purdah in the Middle-East; of the exploitation through skin-tight sweaters and short skirts as sex adjuncts at the Gladiatorial contests in Western world football arenas; of starvation and poverty in the so-called 4th world nations where *no-one* is able or can afford the luxury of play; of statistics which may be shown to reflect whatever a particular programme wishes reflected; of sport as a substitute for war; of latent fear which motivates segments of populations to participate in sport; of the incalculable and vastly powerful effects of the media upon body and mind through sports-listening and watching; of the differences in individual and national aspirations; of the manipulation of sportsmen and women; about the nation of China, its approach to Sport and future Olympic sports participation; about the non-competitiveness of the Eskimo.

Each of you is eager to voice other features requiring identification and action.

What can, what should, this organization do on the international plane? There is much to be done.

To bring things to a perspective, let me read something written by Vince Lombardi and something by C. H. Sorley.

I wish you to question these statements:

1) "The will to excel and the will to win, they endure.
They are more important than any events that occasion them."
Vince Lombardi

and

2) The Song of the Ungirt Runners — Charles Hamilton Sorley, 1895 - 1915

We swing ungirded hips,
And lightened are our eyes,
The rain is on our lips,
We do not run for prize.

We know not whom we trust,
Nor whitherward we fare,
But we run because we must
Through the great wide air.

The waters of the seas
Are troubled as by storm.
The tempest strips the trees
And does not leave us warm.
Does the tearing tempest pause?
Do the tree-tops ask it why?
So we run without a cause
'Neath the big bare sky.

The rain is on our lips,
We do not run for prize

But the storm the water whips
And the wave howls to the skies
The winds arise and strike it
And scatter it like sand,
And we run because we like it
Through the broad bright land.

This statement by Aldous Huxley in *Ends and Means* sum the place and the worth of sport for me — how about you?

> Like every other instrument that man has invented, sport can be used for good or for evil purposes. Used well it can teach endurance and courage, a sense of fair play, and a respect for rules, co-ordinated effort and the subordination of personal interests to those of the group. Used badly, it can encourage personal insanity and group vanity, greedy desire for victory and hatred for rivals, an intolerant esprit de corps and contempt for people who are beyond a certain arbitrarily selected pale.

SPORTS WOMEN IN TODAY'S WORLD ASPECTS AND PROBLEMS

Liselott Diem, President
International Association of Physical Education
and Sports for Girls and Women

1. Short review about the International Association of Physical Education and Sports for Girls and Women

As President of the International Association of Physical Education and Sports for Girls and Women let me give a short review and our thanks to the American Women. Because at the suggestion of the National Association of Physical Education for College Women in the United States, in 1949 in Copenhagen was established this world wide important Association for Girls and Women. 235 representatives of universities, colleges and schools from 24 nations met at Copenhagen for the *1st International Congress of Physical Education and Sports for Women*.

The spiritus rector of this new organization was Dorothy Ainsworth. At this moment we remember her humanity and her internationality with special gratitude warmly greeting her. The Danish Minister of Education, Dr. Harvig Frisch and the Rector of the University of Copenhagen, Prof. D. Hansen, opened the congress in the great hall of the university.

Four years later, the French Minister of Education, Andre Marie, and the High Commissioner of Youth and Sports, Gaston Roux, welcomed the 500 members of the *2nd International Congress* in the amphitheatre Richelieu at the Sorbonne. The foreign guests stayed at the Cité Universitaire.

The 3rd International Congress took place at the Bedford College for Women 1957 in London, Great Britain, under the leadership of the United Kingdom Committee for In-

ternational Conferences on Physical Education; and *the 4th International Congress* was organized in Washington, D.C. 1961 with its topic: "Expanding Horizons of Physical Education".

The 5th International Congress was held 1965 at the Deutsche Sporthochschule Koln/Germany under the sponsorship of the Federal Ministry of Inner Affairs with 673 participants of 14 nations. The topic was: "Adolescents of Today — Problems of Physical Education".

The 6th International Congress took place 1969 in Tokyo under the sponsorship of the Minister of Education and the opening ceremony was held in the presence of Her Imperial Highness, the Crown Princess of Japan. The topic was: "Traditional and Modern Forms of Physical Education".

The 7th International Congress was organized in 1973 in Teheran/Iran under the sponsorship of Her Imperial Majesty, the Shahbanou of Iran with the help of the Deputy Prime Minister and President of the Physical Education Organization of Iran. The topic was: "Sport for All".

Perhaps you will know that *the 8th International* Congress is planned from Aug 14-20, 1977, to take place in Cape Town/South Africa with the topic: "Better Teaching and Coaching" by assistance of our longtime member, Isabelle Nel, who was appointed the first ordinary professor for Physical Education in South Africa after she got her academic degrees in the United States.

You know the problems of this choice, but our members from Egypt and South Africa stood together for this selection with the slogan: "From Cairo to Cape!" In 1973 the South-African Group demonstrated in Teheran with the coloured children group from Cape Town with such a big success for this sign of cooperation of the black and white population that all women delegates wish to demonstrate with the Congress in South Africa the will for non-discrimination, and I as the President declare here once more: everybody in this Congress has the same rights, will stay in the same hotel, under the same human conditions as the president. We hope that at this occasion other African countries will come as our cooperators in this pedagogic field of physical education and sport.

Under the leadership of Isabelle Nel there is working a mixed group in the organizing committee: from the Black, from the White and from the Indian group. And before the Congress in Cape Town will be held in Mbabane/Swaziland from 11. — 13.8.1977 a 3-days conference especially for Women Sport under the sponsorship of the Ministry of Education.

From all congresses printed reports were published. They show a good picture about our theme of today "Aspects and Problems of Women Sports". Also a "Review" of the International Association of Physical Education and Sports for Girls and Women was published twice a year 1958, 1959 and 1960 with the support of Dorothy Ainsworth. By this material you can learn the different opinions and the development of girls' and women's sports throughout the world.

2. Sports Women in Today's — Aspects

There should be written a book about all the forgotten sportswomen in earlier days, p.e. Mary Read and Anne Bonny, known as women pirates in the Caribbean Sea. Songs tell about the daring adventures when capturing together with their wild crews other ships and fighting with the sabre better than men!

Who knows that the Hera temple in Olympia is older than the Zeus temple and that ancient Olympic Games were created by women? So the Austrian historian Erwin Mehl is reporting: "... as consequences of a pre-Helenic world which was determined by women. This world was in many respects more human than the following 'world of men'."

The modern Olympic Games are not a young foundation, they have a respectable tradition out of the ancient matriarchalic games and therefore, the participation of women was not allowed in the Olympic Games of men: till today some men are afraid about the entrance of women into the world of competitional sports, (as well as in the world of politics).

Also Pierre de Coubertin saw the role of women in Olympic Sports only "... to crown

the winners with garlands."

Who knows that an excellently organized "Fédération Sportive Feminine Internationale" (International Women Sports Federation) was established in 1921 in Paris under the leadership of President Madame Milliat:

> "Founded in Paris in 1921, the Fédération Sportive Feminine Internationale has already realized a great work. It is now acknowledged everywhere that women benefit by sports and that efforts must be united in a same emulation giving rise to the Progress which enables us to come nearer and nearer to our aim; to strengthen the young girl, to ensure her health and vigour, good physical and moral equilibrium, enabling her to spread joy and happiness around her, to found a healthy and robust family; to help her Country against social plagues and to contribute to the peace of the world...
>
> Those who criticise women sports do not understand their aim; they see nothing but the mere record-breaking and public competitions. They do not reflect that without competition there would be no progress in the World. In every branch of human activity there is competition. It can be noted in the family even before school-age, and continues in school, industrial, commercial or purely intellectual life. Then, why complain of it in sports? ...
>
> Sports do not deprive young girls of their graceful figures nor the harmony of movement. On the contrary. We are conscious of having worked for the improved condition of Woman, to whatever class of society she belongs, of having helped to make her healthy, morally and physically, without any fear for her responsibilities but also with a sense of her rights and ready to have them respected in every domain...."

Affiliated to this International Women Sports Federation 30 nations were 1928: South Africa, Germany, Argentine, Austria, Belgium, Canada, United States of America, France, Great Britain, Greece, Netherlands, Italy, Japan, Letland, Estland, Littauen, Luxembourg, Poland, Roumania, Sweden, Switzerland, Czechoslovakia, Yugoslavia. There were held 8 congresses in Paris, Goteborg, Amsterdam, Prague, Vienna, London and between the congresses conferences in Paris, Breslau, Amsterdam, Boulogne, Prague and Rome.

Four times Women sports World Games were organized with a full athletic program in combination with Ball Games: 1922 in Paris, 1926 in Gothenburg, 1930 in Prague, 1934 in London. The organization was authorized to take part with its various associations in the Olympic Games 1928, 1932 and 1936, however with a limited program in athletism. In my library I have two pamphlets of this federation including their important history of Women Sports Development.

You see, 50 years ago women were much more liberalized than today — it was a long way to give any chance to anybody for any sport.

Maybe, this is our advantage: by overcoming obstacles women became more resistant and also creative in their arguments.

There were a lot of restrictions to overcome:

> — first from the aesthetical point of view. "They are not looking charming when they are competing and especially sweating is not lady-like". Men were afraid that women by sports "lose the womanliness and stress the manliness", and
>
> —second from the medical point of view. "The muscles would become too strong, too hard." Girls should not jump abroad further than 2/3 of their own length" or in the high jump "they should not jump higher than up to their knees"! This is not a joke, it was written in some medical statements.

There were a lot of examples throughout the last century in the medical field, p.e. expertizes against soccer because this play would not suit the women's condition, but the women's soccer increased so fast that now after two years other medical advisors must give the exact contrary — they agreed that women's soccer is healthy and now women have their international soccer competition and they play whatever they want to play.

Also in schools of today some medical advisors are hindering children and especially girls: They excuse those girls from physical education who need more and not less

training. We know examples that by entering in a new sport some doctors gave a negative aspect to the ability of women to enter this sport (like soccer in Germany) and if women start sport against this aspect and have success in this sport the same doctors some years later contradict their first decision.

Sports-women have to open the doors in the world of sports with their own hands. There is nobody helping them.

3. Sportswomen — some examples

There are girls who like to work hard and to train hard, sometimes many hours a day to run, to swim, beside the school work, like Shane Gould. The Australian girl trained with her comrades from 6-8 in the morning, and from 5-7 in the evening, and in the between time she worked in the school from 9-4; — in both fields with great success. She won 3 gold medals in the Olympic Games in Munich 1972. But there are other girls training as hard as the Olympic competitors, but unknown and never named in the press: like the pretty US-girl Nathalie Cullimore who was running 100 miles here in Santa Barbara in 16:11 hours. She came in as second in a mixed field of men and women.

Also I mention Lia Manoliu, the Rumanian Olympic winner, 6 times participating in the Olympic Games. Often she was hopeless but she never gave up, again and again she was ready to start, to compete with herself besides her work as an engineer. Always she returned to the "exciting Olympic sports". In Mexico 1968 she had only one chance because she was hurt at the elbow and was only allowed to do one throw with the disc and she won the gold medal. Her report was just printed in German by our Carl-Diem-Institute with the typical title she gave to this report "Sport has elected me".

Sports women of today may enter into any field of sport, like:

— Anita Wold, Norway, one of the first ski-jumpers, 19 years old. For her ski-jumping was nothing unusual. She began to jump together with the boys with 8 years in Trondheim, and with 15 years she was accepted within the male trainings group.

— Sue Sally Hale, USA, the first woman to make it into an official polo game. 17 years she had to fight to be accepted in a sport where she simply was not wanted.

— Mary Tracy Gaffaney, USA, Women's World Aerobatic Champion, 17.000-hour pilot, got three airline transport ratings the "Billie Jean King of Aviation."

— The all-women party with Dr. Grace Hoeman, Anchorage, Faye Kerr, Australia, Margaret Clar, New Zealand, Dana Isherwood, Margaret Young and Arlene Blum, USA pushed to the top of Mt. Mc. Kinly, with its 20.000 feet the highest mountain in North America and the most arctic of the world.

— Olga Korbut, Russia, at the age of 17 three gold medals in Munich in gymnastics. "She is almost a contortionist," says a US Gymnastics Federation judge.

— Lella Lombardi, Italy, 31-year old, a Grandprix driver in a Formula I, was 6th in the final heat of a race for which there had been 45 entries, ahead were 5 grand prix drivers, behind her 17 other men like Johnny Rutherford, winner of 1975 Indianapolis 500.

— Kate Coleman, demonstrating Kung Fu, the Chinese martial art originally taught exclusively at religious temples.

— Clare Francis, across the Atlantic Alone. She beat the Mayflower by 29 days.

There are sportswomen in motorcycling compete in international caliber motorcross courses, river crossing and mountains for the Grand Prix. There are women as well in ice-hockey as in boxing matches today — that is not a question of right or wrong, of good or worse, this is only a question of personal need and individual motivation in the same way for women like for men. It is interesting that the Winter Olympic Games 1976 in Innsbruck were named "The Olympic Games of Rosi Mittermeier." Her success and

her personality were the provocation for this remarkable headline. There are sportswomen long years after their time of records well known all over the world like Sonja Henie, Dawn Fraser, Esther Williams, or Heide Rosendahl.

4. Sportswomen — Problems of Today

Sportswomen of Today are active with success as amateur and professional, as participant or as coach are training as well women-groups as men-groups.

In the modern society we need partnership and coexistence. Democratic life means to live in a community with the same rights, the same possiblilties for family, for business and for sport. There should be no handicap and no closed doors. In the United States the Title IX of the Education Amendments of 1972 provides that:

> "no person in the United States shall on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance"

and

> "No course offerings may be conducted separately on the basis of sex including health, physical education, industrial arts, business, vocational, technical, home economics, music, and adult education, and no student may be required to participate or be refused participation in any course offering on the basis of sex."

This new non-discrimination act on the basis of sex is necessary in each country where not the same rights for both sexes are given. Open doors for women and men in any sport. To like sport, it is only a question of motivation.

No woman can lose her womanly lines, even if she is dressed like a man or if she is doing a so-called "typical" man's sport. Womanly always is an expression of herself, and has not come from an outside instruction. Women are so different in their behavior as sports are different in their nature, their techniques, their art of performance.

Women have not to be a product of other people's thinking, they have not to play a foreign role, to be guided by traditional image; they have only to discover themselves, their own individual attitudes, their single personality. They have to play also in Sports their personal role and by playing this role to develop more and more their originality. Women have to learn, not to be a cliché, a mirror of someone's imagination, to motivate themselves, to train themselves carefully and to choose their own sport, because they like it. The better men and women are developing their self understanding — the better they work, they play, they exist together in a modern society.

Men must learn to accept the equal chances of women in sports and physical education — to cooperate with women and not to lead them or to keep them like minors — women do not need protective rules and women must learn to be responsible for themselves, to make their own decisions, to organize and discipline themselves. Emancipation is necessary for men and for women.

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1) Federal Register, June 20, 1974. Washington D.C.

ATHLETICS IN TRANSFORMATION

Positive or Negative Transfer

RETAINING THE POSITIVE VALUES

Frank L. Bare
Executive Director
United States Gymnastics Federation

There has always been a carry-over value attributed to participation in athletics. Many times the positive values claimed are used to advertise programs both in the area of competitive athletics and in physical education activities. It is not necessary here to dwell at length on the basic contribution to be gained by such participation. I am confident that all of us here recognize that properly planned and administered programs in sports activities contribute in varied and measureable ways to those taking part. What may not be so apparent to everyone involved is the variation between positive and negative transfer for the athlete involved in sports at the highest level, that is, for the athlete participating in amateur athletics at the international level.

I believe that most aspiring young athletes, particularly those just entering the world of amateur sports be it in their school program or a club program, quite honestly dwell in the realistic world they take part in, but dream to some degree of the Olympics or other high level competitions which are held out before them as the ultimate sports event. These early, idealistic dreams, are perhaps motivational and serve to keep the budding interest alive until skills replace pains and associations and friendships replace the loneliness of a young yet untalented athlete. This quiet aspiration to the highest achievement in amateur sports may

indeed motivate more youngsters than we care to recognize.

Positive benefits from participation in international level sports exchanges are numerous and most of them are quite obvious to spectators via television, to parents and friends and school-mates, to the coaches involved and to team-mates suffering defeats and enjoying victories as a group. The exposure to foreign nations, and residents of those lands, different languages, foods, customs and even brief skirmishes with foreign governments provide an education not attainable in the classroom. In many ways the making of an international team, such as an Olympic team, is the highest point in a given athlete's career. Many times it is apparent that the making of the team is the most important point, and the games that follow are to be a thrill, but second in rank as far as achievement is concerned. Many of the athletes making such a team have indeed reached the pinacle of their career and such goals as an Olympic medal are already far beyond their reach based on skill. The pride of having made the team is enough and perhaps it is well-deserved recognition for years of effort and determination that preceded such recognition.

When the time comes to enter the arena of international competition, here too, one may find a number of positive values. Experiences of a type that cannot be measured and certainly cannot be found short of the competitive field at this highest of levels. Merely to walk on the field with Olympic and world record holders must surely be a maturing experience. To stand ready to compete with such world-class athletes and be a total unknown, yet having for this brief moment an opportunity to be the world's best, has simply got to be one of life's most notable moments. It is an experience known to very few and may well be an achievement second to none in the world of amateur sports.

There are a number of experiences one finds in the world of amateur sports that were not in the original plans. No one can explain them, or perhaps more candidly, no one cares to explain them. They are the unknown factors that negate years of planning and coaching and training. They can reverse years of effort in one brief moment and for the most part have little or nothing to do with sports. Such things as bad draws for position, wrong lanes, bad starting times, the wrong equipment and the final and most serious, at least as far as some sports are concerned, the wrong national emblem on your training clothes. If I have suggested that nationalism exists in the international sports world then perhaps I am in error. At least, I am sure that I am in error as far as a number of officials from various nations are concerned. There are many officials who apologize after a gymnastics event, for doing as "they had too". Nationalism is like TWA's new advertising slogan suggests...."winning isn't everything...it's the ONLY thing".

I would like to turn to the two areas of negative transfer in athletics that I feel present the greatest threat to athlete and program alike. I would like to make you more aware of the serious problems these two negative aspects of sport present, and through the use of some firsthand anecdotes show how it works. Nationalism in sports is the greatest threat to continued international sports programs today. Each year sees the situation worsen, I assure you it does not get better, it grows and becomes more intense with each passing year. It exists everywhere and in every sport, more noticeably in those that are subjectively judged obviously, but none-the-less it is always present either on the floor of competition or in the restaurants of the host city between competitive events. The massive effort if not limited to nations from the Eastern bloc of nations, although certainly they are masters at the game, but also is quite obvious in the Western world when needed. So long as certain nations feel that a victory on the floor of international competition illustrates to the world that their system of government is, logically therefore, better than that government of the losing team, we will see no end to this problem. As new emerging nations seek to participate in large-scale, world-class events and also seek to gain national recognition by winning we will see more dealing between nations to gain that end. It is unbelieveably obvious at many events, such as the Pan-American Games. One of the most brutal facets of this entire effort is that aimed at selected officials by their own countries. An official selected for an Olympic or world games 'must' perform as directed or certainly there will never be another opportunity for travel, experience or involvement. Failure to perform properly could result in the worst possible personal consequences, and pressures such as these make unbiased evaluation totally out of the question. The negative transfer to the athlete is obvious. In those sports not using time or distance to determine the winner, any experienced athlete has a fair idea as to their relative placement among those participating. How do you explain to a mature, experienced youngster that the score they received was at least partially based on factors other than

performance.

At a recent meeting of the International Olympic Committee held in Vienna, I heard Lord Killanin remark, that of the more than twenty sports currently seeking admission to the Olympic Games most certainly only those that can be decided by time and distance would ever be considered. It was pointed testimony regarding the problems that nationalistic officiating has created for these largest of amateur games.

The second area of great concern is that of the imperfect, if not non-existent definition of an amateur and/or a professional athlete. We have heard that unfortunately all the amateurs are in positions administering the sports and the professionals are on the competitive floor. There is considerable truth in the bit of humor. We see the obvious professionals making six-figure salaries while skiing for their countries as amateurs. The less obvious 'pros' such as we have in track and field, who make thousands of dollars on the circuit in Europe each summer. The amateur-pros, such as they have in Switzerland who have company sponsors and participate in a program allowing one-half day, every day free for training. In some nations the coach is a professional yet a teacher of sports is not. Both do precisely the same things in most circumstances. I assure you that if needed the teacher of sports will be eligible in many parts of the world. Almost every international sports federation bases its amateur rules on the IOC Rule 26. But no one can enforce it and no one clearly understands the difference because there is no clear definition of amateur or professional.

The IOC has ruled now that broken-time payments for interruption of employment may be allowed. Certain agreements may be signed between National Olympic Committees and/or governing bodies that allow for use of photographs of athletes in catalogs, etc., that previously were not permitted. These arrangements are possible for business purposes. The athletes may not receive the funds but the NOC or appropriate Federations may. Awards are limited by each federation as well. That is the value of awards for competitions is limited. The International Gymnastics Federation met and discussed the limitation and arrived at 2,000 Swiss Francs, as the limit for the value of an award or one event. That's about $800.00. The shape of the award was not spelled out, so I assume it can be almost any item the hosts feel suitable for the event. In the light of all these very obvious actions, we in the United States continue to be criticized because of our athletic scholarship program. Yet it is quite clear, I believe, that in spite of some obvious pitfalls connected with our system, we stand as perhaps the most amateur of all nations today.

Nationalism and professionalism -- Two problem areas in the world of amateur sports 1976. National anthems are played while the national flag is hoisted above the winners head. Unofficial medal counts appear daily in the newspapers of the host nation during the conduct of the various games. The winner of the games, although there really is none, is that nation collecting the most medals...or is the most gold medals. Athletes are awarded and rewarded when they win, place or show. If they are wearing the correct shoes, vaulting with the correct pole and carrying the correct pair of skiis to the award stand. Recently the newspapers here in the USA have bemoaned our lack of ability to field a representative team in basketball. Our best players it seems have already protected their bargaining ability by signing with professional teams, thereby losing their amateur status and no longer being eligible for the Olympic Games in Montreal this July. The players fear that if they should look bad in Montreal, or worse yet be left sitting on the bench, their value would diminish and it would be less advantageous to sign a contract. One can scarcely argue with the logic, but if they have yet to play a professional game, wouldn't the nation's interest be best served by allowing them to be amateurs until they play for pay at some date after Montreal, even if they had signed to do before that time. In 1976 I cannot help but question why we seem so intent on eliminating an athlete for signing a contract, when we will enter track athletes who without signing anything made many thousands of dollars last summer on the amateur tour. On the reverse sign of that coin, we must look back to the many athletes that have entered the games as unknowns to come out with a title that directly or indirectly brought them contracts worth considerable amounts. Somewhere we must come up with a workable plan dealing with amateurism and professionalism that is both modern and realistic. To date we clearly have not done so.

The United States has had another problem of internal factions in amateur sports. Perhaps more than most people, I am aware of that battle which continues in many sports today. We were the group that for seven years was considered revolutionary. Then we became the governing body for our sport and we have watched the sport grow and improve for many

years now, but I have not forgotten the problems placed before us to reach the point of recognition. The United States government too is aware of the feuds. Currently a President's Commission on Olympic Sports is wrapping up nearly a full-year's investigation of the U.S. Olympic Committee and the various amateur sports federations. Their report is due in the White House in September and hopefully it will be a constructive report, calling for the very least re-structuring of the USOC at the earliest possible time. One could conduct a number of studies on the USOC. It is one of the most complicated structures imaginable. It's structure has evolved over a period of years solely on the basis of political favoritism to one or the other organization. Even as recently as December of 1974 this organizational influence was evidenced once again.

In the area of international sports, the USA stands as perhaps the finest example of what can be done, in spite of our national effort. What I am attempting to say is that we have no truly national effort. There is no time when the national image of our teams stands before every other aspect of our national programs. We seldom if ever have a time when all national organizations forget their respective programs and cooperate fully for the sake of the national image. This is not to say that these organizations necessarily are against the nation looking well internationally, it is that sometimes the international event simply does not fit well in the national schedule. The problem is that in other countries, nothing stands before the national team image. There is, as of this writing, no single agency in the United States that has either the authority nor the ability to gather the nation's finest amateurs for a given event. Worse than that, there is never any time when the powerful groups that control to some degree our best athletes ever sit down together to try to arrange such gatherings of talent. Whereas in many nations the Olympic Committee has total responsibility over such matters and answers directly to their government, we in the USA are told that such government interference would cause us to be thrown out of the Olympic movement. Further, we are told this by our own Olympic Committee. It is clear beyond any reasonable doubt that if we are to have any superior sports agency in the USA, assuming all or part of the responsibility for specific events internationally that the U.S. Olympic Committee cannot be that agency. One need only study the structure of the USOC to see that it has lost the ability to either function representing the constituency it holds, or on behalf of the athletes it is charged with gathering.

The positive values of sports participation will remain as long as the opportunity for pleasant international exchanges exist. Our youthful athletes seem to have a way to surmont all the obstacles we place before them, and even others such as language seem to melt away before their eyes. At its very worst, amateur athletics on the international level is well worth saving. If only we could improve upon it to some degree. Can we bring ourselves together when need be and change some archaic rules concerning amateurism, without sacrificing principles altogether? Can we devise rules that are fair regardless of the nation attempting to enforce them? Can we structure an agency with one vote per organization regardless of the number of sports they represent, so that stacking of votes might be stopped before it begins? I do not pretend to know the answer to these questions, which seem so simple on the outside. I for one find it difficult to believe that we cannot create an agency of existing organizations on a par with one another, and get on to the problem of aiding those athletes from the United States who have the ability and desire to go on towards higher levels of sports competitions.

I would hope that those who come later, and assume the roles of leadership in amateur sports here in the United States will find it more appropriate to work for the betterment of conditions for the training and preparation of athletes, without consideration of the organization that contributed to their achievement. The resolve we must face now, is that of taking strong steps to eliminate the influence of nationalism on sports at the international level. It requires a strong stance by all the federations in our country, unified in effort to change a steadily worsening trend that can only do harm to the international program.

If we need a new agency, let us form one from the private sector of American life, and seek funding from the business sector of American life to preserve a vital and enjoyable portion of our way of living for millions of our youngsters in the years to come.

COMMITMENT TO SANITY IN SPORT

Cal Papatsos
Queens College of the City University of New York
Flushing, New York

When I was asked to address this group on the subject of athletics, I readily consented....even though I am convinced that I cannot add substantially to the store of knowledge in this room....but I also admit that it isn't too often that a provincial New Yorker gets such an invitation.

The invitation suggested two options....up to the minute viewpoints....and facts. For any one as opinionated as myself....that presents a problem....only of course if one attempts to separate the facts from the viewpoints....I shall attempt to avoid the trap....if and where possible.

I therefore begin with some general statements on which there seems to be agreement.

We are, indeed, in a period of transformation. Sport in our society is a major force....it is big business and almost everyone shows some degree of concern, from the oval office in the White House to Congress to the local school board, to the smallest little league committee....everyone wants to get into the act.

The emphasis on spectator sports looms larger each day and approaches the status of sport in the Roman Empire *during the period of its decline*. There is one difference . . . . the Romans didn't have to cope with the problems of intercollegiate sports. Our civilization has exclusive claim to that unique phenomenon.

It is *in* our schools and colleges that the uniqueness of American athletics is most apparent....while the primary purpose is to provide students with the opportunity to achieve excellence....it doesn't always work....values tend to become distorted and this is one of our major problems.

As educators and as leaders of physical education programs in higher education....as the teachers of teachers....we are in a critical position of power and could influence the direction of sport in this country....but in order to do so we must understand the forces that exist.

I believe that the *governance* of intercollegiate athletics is one force that we can and must influence. Herein lies the greatest hope for achieving sanity in sport.

We need to develop and accept a model that guarantees educationally and morally sound athletic programs in our colleges. For more than half a century we have had a model that was restricted to one sex. It was a very good model and led to the development of many programs....it offered a vast network of opportunities for the young male athletes in our institutions....but somewhere, somehow, values got distorted, and in some institutions, commercial considerations became more important than educational objectives. In some places, instead of students who participate in athletics, we find athletes who pretend to be students.

The civil rights movement — a new assertive posture nurtured by the women's movement — the legislative bodies and the courts have mandated changes, and another model started by women — for women — has been developed. I would remind you that the initial

leadership for the genesis of the AIAW came from members of this organization.

It behooves us to analyze the current state of affairs as it applies to the governance of intercollegiate athletics — to cope with it we must understand it. One simple way to do this is to compare the most recent conventions of the two major governance bodies, the AIAW and the NCAA. My personal involvement with each stems from the fact that for the past two years I have represented my college as the voting delegate at AIAW and NCAA. The following remarks are taken from the personal report which I submitted to the President of Queens College upon my return from both conventions. It defines the differences as I perceived them.

The agendas for both January events were comparable — the same governance issues were to be discussed, which was logical, since both groups were dealing with the governance of intercollegiate athletics. The actions that ensued, however, were far from similar, and were worth noting.

The NCAA is one of several organizations that control men's intercollegiate athletics. It is not the largest in number of member institutions, but it commands more media attention, because it includes the major revenue-producing college teams and thus controls the lucrative TV and Bowl games. It is a multi-million-dollar conglomerate with two unstated desires: to control women's athletics and to have monopolistic control of international competition. The AIAW, founded five years ago by women to meet the needs of women, is the only governance body for women's intercollegiate athletics.

When one notes the purposes of each group, as given in the prefaces of their rulebooks, the similarity is apparent. Both purport to provide educational opportunities through the medium of sport.

What, then, were the differences? Why did the women find educationally sound alternatives based on simple logic that could help to restore sanity to all athletics? To find the answer, one needs to note the differences.

The NCAA programs are funded with such extravagance that last summer a special convention was necessary to curtail some of the spending. This was held in August, but most of the economy measures were rescinded. Meanwhile, funding for women's programs has been so feeble and discriminatory that it took an act of Congress (Title IX) to motivate a semblance of equality. Ironically, the NCAA spent more money lobbying against the guidelines of Title IX than the AIAW had spent in one year to conduct 17 national women's tournaments.

The men's group dealt with the issue of TV income and rejected the "Robin Hood" plan of Steven Horn, president of Long Beach State, to share the wealth. The women also talked about TV revenues. Their contract — a first for them — was in five digits, as compared to the men's millions, but a percentage potential was built in. A major portion of all TV income was earmarked for AIAW administrative expenses and rebates to member institutions.

While the men rejected a proposal to base financial aid to athletics on a need basis, the women passed a resolution urging "all intercollegiate governing groups to adopt a uniform policy of limiting financial aid based on athletic ability to tuition and fees."

The new rules and extension of old ones adopted by the NCAA numbered in the hundreds. Most were attempts to legislate equal competition among the super-powers, an impossible task, and one that aliented most of the other colleges. As the men added rules, the women adopted a policy of restraint and reinforced institutional autonomy by passing the following resolution:

> In keeping with the principle of treating intercollegiate athletics as an educational activity subject to the same standards and controls as other college-sponsored activities, AIAW should impose only those regulations necessary to guarantee the following:
>
> 1. Fair competition for all
> 2. Protection of the health and safety of all participants
> 3. Equal opportunity for women students

And what about the students? Aren't they the ones this is all about? Reference to students in the men's parley was limited to contractural arrangements. The women dealt with this issue in humanistic style and gave student athletes a vote on the executive board of AIAW

and on each sport committee, and even placed a student on the appeals-board panel.

An indirect legalistic concern for women student athletes did penetrate in the final minutes of NCAA deliberations. The NCAA Council (the all-male inner power structure) renewed its efforts to intrude in women's sports. This proposal, based on an alleged legal mandate, was rejected at last year's convention. It was a college president, this time, who led the move to defer any such action, and the proposal was buried by referral back to committee.

This "big brother will take care of you, jock mentality" has no place in today's society. The AIAW women have proven their ability to govern their own programs. They have developed a viable alternative to the NCAA governance of intercollegiate athletics and have done so despite the blatant sexism that limits funds and facilities for women. Their goal is not one of total separatism, their quest is for equality of opportunity. Most women athletic leaders advocate a single, unified governance structure for all college athletics, that they can join as equal partners and with an equal voice in policy-making decisions.

The NCAA male model has levels of excellence and has stood the test of time, but some parts are in dire need of reform. This is what prompted the attendance and direct involvement of 85 college presidents — a fact underscored by President Ross Pritchard of Arkansas State University at the NCAA awards luncheon. He urged the NCAA to review and focus more carefully on what is essential in athletics and to redefine the policy and decision-making process. He warned of dangers in the rambunctious urge to keep up with competition and likened the peculiar regeneration of expenditures to the drunk who increases his drinking to forget that he is drunk.

The college presidents rocked the boat in St. Louis. The women rocked the boat in Scottsdale. When the AIAW decisions reach the presidents, it should be obvious that both were charting the same course. It could mean smooth sailing for all athletics.

But where do we go from here.... What is our charge, what is our obligation to the young college women who look to us for leadership? There is a dire need for assertive and positive leadership, a kind that was never a part of our college training. The academic world in which we were educated reflected society in general and such behavior by women was neither accepted or demanded. When one lives in a society with limited opportunities, the expectations of that society are restricted....but as these limitations disappear we may need to change our style.

Laws such as Title VII, Title IX, and the Equal Pay Act which mandate equality, will only be implemented when we get personally involved in the action. We can no longer afford the safe but submissive posture that has been so comfortable, that of the "Cooperative Woman" who accepted meager budgets, practiced at times that didn't inconvenience the "boys," and accepted lower salaries for doing the same job.

Nor can we retreat to the security of our physical education departments and shun involvement with the athletic departments. We cannot ignore the bright new breed of woman who chooses the post of women's athletic director, or chooses to be a coach. We cannot afford the luxury of such isolation. If we are to serve the needs of all our students we must build bridges, even if it means compromise. We must unite forces in order to capitalize on our legal gains. We must take the offensive for what we believe and know to be right.

I am not advocating the posture of militancy that often is self-destructive and leads to alienation, but I do urge that we adopt an assertive stance and that we assume responsibility. If we demand equality then we must be prepared and willing to make an equal contribution.

But it will not be easy.

I am tired of being warned, admonished, chided and threatened, with the statement, "Don't make the same mistakes as the men." What they're telling me is don't make the mistakes *I'm making*. My response to my distinguished male colleagues is, "Why don't you stop making the mistakes?"

True equality need not be limited to success; it should mean the right to fail. And will some women fail? Of course they will. I sometimes feel we're playing with a stacked deck. We're novices at big time activities and we are mandated by our students, the law and public pressure to be part of it. To those who would evade the responsibility, I ask only that you analyze your commitment to the students in your institution. And if we truly believe what our foremothers spent a half century trying to teach us — that we have a responsibility to all who play — that we are leaders with the objective of providing meaningful experiences — then we must accept this new responsibility.

I believe that men are commited to the same principles we are — that most men seek the same "sanity in sport" — I am convinced that together we could help develop a model that treats intercollegiate athletics as an educational activity subject to the same standards and controls as other college sponsored activities.

We could restore sanity to athletics and could guarantee academic legitimacy for all athletic programs.

We have the power to do all this.

I hope we find the courage.

AN EPOCH IN ATHLETICS

Joan S. Hult
University of Maryland

It was the best of times, it was the work of times; it was the age of wisdom, it was the age of foolishness; it was the epoch of belief, it was the epoch of incredulity; it was the season of light, it was the season of darkness; it was the spring of hope, it was the winter of despair; we had everything before us, we had nothing before us; ...(1)

While Dickens was describing the French revolution, he might well have been describing the women's athletic revolution. Title IX of the Education Amendments of 1972 has to be the most significant factor in moving the revolution forward through legislation. The legislation helps make it the *best of times* of effectuate change in discriminatory practices in intercollegiate athletics. It likewise, however, brings with it the potential for making it the *worst of times* if women are forced to, or select to follow a male dominated model of athletics. A model which has been burdened with conflicts, afflictions, and corruption. A model designed primarily to entertain, and which exploits athletes through "play for pay." A model which is so often dehumanizing to the student-athlete. The simple final truth is that for the most part in men's intercollegiate athletics "winning isn't everything, it is the only thing". It seems incredible that we would blindly follow such a lead, a lead which would assure *an age of foolishness* for women in athletics. The entrance of women in large numbers into the sports arena brings with it the potential for women to help lead men and women to an *age of wisdom* in athletics. If we step forward with a new boldness and a "game plan" which offers opportunity for new directional pathways and new dimensions which are philosophically sound and administratively feasible, athletics can have a new sanity. The transformation can happen by keeping the governance and automony of women's athletics exactly where it should be, with women. With women until that moment in history when the governing bodies of collegiate sports NCAA, NAIA and AIAW can meet and discuss their differences and begin to make compromises which are in the best interest of *all* student-athletes. Policies which are based upon sound educational objectives and philosophical principles in which the *focus of attention* is upon the individual participant in his/her primary role as a college student. Compromises which demonstrate the justification for athletics with emphasis on the quality of the experience for the athlete, not based upon the criteria of the *gate receipts, crowd appeal*; or the *scoreboard* as the *true*

measure of success. As long as the leadership of athletics remains with men who have determined all rules and regulations while caught in a web of commercialization, we will not only have inequality in funds and programs; but more fundamental to women's rights, we will be denied the *right* to determine our own destiny in athletics. The NCAA, as recently as last January, had a resolution before their membership asking for complete control of women athletes. (2) In addition, their "legal opinion" said they should have control of women's athletic as a part of their total program. (3) Yet, even as they expand on their desire to help all athletes achieve equality of opportunity in sports, they have filed a suit in the U.S. District Court in Kansas City aimed at exempting sports from new federal rules barring sex discrimination in schools and colleges. An action hardly consistent with their words of desire for equality of opportunity for female student athletes.

In spite of the NCAA threat to our being, and athletic freedom, it can be an *epoch* of *belief* and not an *epoch* of incredulity if we do, if fact, believe in the essential worth and unique vision of a model of athletics which does not lead us to the paths of commercialization, and male domination. If we believe in our own destiny and not *accept* the presupposed and predetermined plan for us, we must *speak* out today for major reforms. We must demand opportunity not only on the playfields, but in the administrative structure of athletics. Campus after campus is being taken over by men. As more funds become available to women in athletics and budgets become a sizable item in the total operation, the control is moving to the *men* not to separate or comparable programs, or even similar programs with women at the helm.

We must gain and maintain governance power and some automony for women in sport for any transformation of athletics. We must believe in our *power* to effectuate change and fight the battles on our local campus where the younger women must and are struggling to develop meaningful experiences for women athletes. But they cannot do this monumental task alone. If any women in physical education have positions of power and automony, it is those of us in NAPECW. We are the women who have watched the growth of sports, and we are the ones who know best how it feels to be deprived of intercollegiate athletic experiences. We *cannot*, like our women leaders of the twenties, turn away from athletics because of the corruption heritage the men are sharing with us. We *must act* with all women in athletics if we are going to have anything more than tokenism in administrative athletic posts, and if we are going to be able to have more than "patched up athletic programs", with temporary freedom for differing or changed programs.

As larger funds are being allocated to women in athletics in both small and large colleges and universities, it is with men Athletic Directors. As is true in all business ventures, where lies control of the purse strings, so lies the power and ultimate decision making power. It is now being vested in the men, to share with the women. As departments of athletics take over the financial burden of women's athletics, the women are slipping into the slot of athletic director under the substructure of men's athletics, or as assistant athletic directors, and more subtle the coordinator of women's athletics. The subordinate role is becoming more and more prevalent.

A Western Society College Women survey in 1975 revealed that more than half of the 114 colleges and universities responding were under the department of athletics and the directorship of men; as were the combined physical education and athletic departments. Fourteen women's departments did still have complete control of women's athletics and six programs were parallel in structure to the men's program. In other parts of the country, the pattern is clearly evident that the men are directing athletic programs and women are under their command. As the programs grow, women are being selected as athletic directors, but not with final decision-making freedoms.

It certainly is not that men are basically evil in athletics and women are not evil, quite the contrary may be the case. It is the loss of freedom to develop and carry out a unique approach to athletics which is being denied. The freedom to develop a program and let the men observe it to see if it is more acceptable. It is this freedom which is being jeopardized with the increased funding and the control of women in athletics by the men. This results in more and more pressure for the women to adjust and "fit" into the patterns of men's athletics.

The "cancer of winning snydrome" is creeping into the women's programs, not only,

of course, because they are under the men's domination; perhaps because women have been deprived for so long, they are willing to sacrifice almost anything for that equality of opportunity, even if it does take away some freedoms and leads to total submission to the present athletic scene.

To gain this kind of equality in the name of duplication is to win a battle while losing the entire revolution for athletics in general, and women in particular. We can, however, have a *season of light* if we can gain access to administrative structures in order to be in a position to help steer a "sanity in sport" course of action, but, we must have freedom to start that action in our own territority of women athletics where we have such a fertile new field. We must demand access to gyms, stadiums, sports arenas, to prime practice time, excellent schedules, facilities, and expert medical attention *right now*, but it is more than this material equality for which we must struggle. The secret of ultimate success lies in gaining access to athletics without mirroring or mimmicking the scandalized recruitment procedures and scholarships violations. It is the responsibility of all women physical educators, but particularly those who have leadership roles to be forerunners for women in sport, and not shy away from or demonstrate non-involvement on the individual campuses and on the national scene. This really is the *pivotal* issue that can bring a season of light in a widespread athletic darkness, or it can be just another season of darkness. The price tag that is being spent on women's athletics may be too high a price for women to have to pay. It may bring us to the point of joining the men in the winning syndrome and obsession with financial aid which has bought them.

We can have a *spring of hope*, however, if we can help re-define the educational purpose of athletics. Once defined and displayed by programs for women in athletics, we can invite the men to join in the same type of program. If, however, women really want the same highly pressurized programs as that operated for men, we should not build separate dynasties. If women want "big time" athletics in spite of the conflicts and afflictions they have observed, let us follow the ebb and flow of the men's programs. There is no need for an AIAW governing body for athletics, if we really want a mirror image of what is before us in men's athletics. We should not fool ourselves that such a program would differ under women. The evidence is becoming clear, given the identical program and philosophy of men's athletics, the women react in like manner to the pressures. The difference may be that women are over-reacting and not as skilled at the technical ability to gain access to the top athletes and build around a winning team.

Women are on the very brink, in women's athletics of a mirror image, and we may be in a *winter of despair*. We have moved to the marketplace with partial and more significant full ride scholarships. We have moved forward as legally as possible in the recruitment game, and sometimes not quite legal. We are chatting about the "blue chip" female athletes. Women coaches begin to talk about recruiting instead of coaching a team to national and regional championships. The climate is definitely one relatively close to the men's model of athletics. A recent article in the Chronicle of Higher Education, "Demands of Women's Athletes Rivaling Those of Men" (4) is a fairly accurate account of what is happening in women's athletics. An earlier article in the same paper entitled "Rules Violations Grow in Women's Sports" (5) discusses the abuses of women in high pressure recruiting of star athletes and placing new stress on women's programs. Although the article is full of inaccuracies and "gossip" the general tenor of the article is frightening for anyone thinking of women's athletics as having a different model or philosophical base. My embryonic work on the Ethics and Eligibility Committee of AIAW likewise is beginning to illustrate the intent of coaches to develop winning teams through recruitment and scholarship inducements. Although much of the pressure is in men's dominated athletics' directorships, several illustrations would demonstrate that women in control are following similar practices.

The transformation in athletics is very apparent as the women struggle with the scholarship and recruitment issues and practices within a framework which is so terribly different from the men's frame of reference. Women are attempting to deal with scholarships and recruitment practices while fundamentally holding to a philosophy in which the athlete is a student first and an athlete second. We have not been able to reconcile our purpose with the real purpose of athletic scholarship and recruitment. The real purpose of scholarships and recruitment for athletics is for the good and public relations of the university. The real purpose of athletics in the view of most women is for the good

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of the participant-period. This leads to the very core of the vital issue and the different perspectives brought to the bargaining table and into the policy making decisions of men's and women's athletics. This is particularly true in the men's traditionally "big time" athletic universities.

On campuses where the athlete receives little or no scholarships money and is not heavily recruited, there is great hope for men and women to work together for the entire good of the total athletic program and to design policies and procedures which can place emphasis on the educational values of athletics. The NAIA and AIAW, for example, have always been supportive of one another's programs. If we are going to be able to have some sanity in athletics and to work cooperatively in a very functional operation, it certainly would be with NAIA. Its goals and purposes are more nearly parallel to those of AIAW. This is perhaps one of the early springs of hope for men and women in conducting educationally sound programs of intercollegiate athletics.

We still may live with everything before us in athletics if we are willing to expend the time, energy, and creative spirit necessary to serve in leadership roles which can help in functional operation of programs which are working toward viable alternatives in athletics for both men and women. We can demonstrate wisdom, and a belief in athletics which can bring us light, hope, and having everything before us. There is *concrete* evidence of more and more possibilities for compromises and "game plans" in athletics which can serve as the models for this period of transition.

There is constant efforts by AIAW and other men's groups to attempt to cooperate and build communication patterns. The Big Ten organization perhaps holds hope for cooperative efforts by men and women without a "take-over" plan. In the plan, each group would keep their autonomy for the present, yet attempt to "bridge the gap" (6) between their philosophical differences.

Several significant efforts have been made to develop a plan of athletics in which there is a separation of revenue and non-revenue programs of athletics. In these cases, it is really a separation of professional money making sports and amateur athletics for the individual student.

The plan suggested by Dorothy McKnight is one of which there is a two-Track System with separation of the two or three money making sports and the rest of the sports together. (7) In such a plan, NCAA is responsible for professional athletics and the other AEIA, Association of Educational Intercollegiate Athletics, for Non Scholarship Sports.

Professor George LaNouse of University of Maryland, Baltimore County, has a plan to be published in the July issue of *Change*. It revolves around "spectator-oriented" and participant-oriented dual track systems for both men and women.

Bowling Green State University has actually structured their athletic administration to follow the concept of revenue and non-revenue sports; one administrative line with three revenues - football, ice hockey and basketball. The other administrative line is responsible for the 21 non-revenue sports; 12 of these are women and 9 men plus a JV for women in several sports.

The Saturday Review in their OUTLOOK section by Roger Williams (8) suggest several alternate plans for athletics. The basic concept being that the present program of athletics is not educational in nature and is a commercialized venture which MUST be stopped immediately.

While creative new plans may be the answer, another approach must be to take the present athletic situation and try to make wholesale reforms within the present system. George Hanford in his 1975 Report to the American Council on Education points out the need for study and changes in the over emphasis of winning and growing commercialism of big time college sport in which over-emphasis is a function in forcing athletic departments to be self-supporting.

An article by Patricia Geadlemans, "The Title IX Saga" suggests there is opportunity with Title IX to "put back into perspective that which has become distorted. We have the opportunity to create that which has been previously nonexistent". She further suggests the probability of a plan very similar to one suggested by Maryland:

> "A delineation of programs according to philosophy such as those programs primarily commercial, business, or entertainment oriented will rightly be so labelled and placed in a common category with like prog-

rams. Those programs purporting to carry an educational emphasis with the student as a central focus will likewise be so labelled and categorized. Programs with varying philosophies will continue to exist but they will not be divided by sex". (9)

Finally there are two other important rays of light for intercollegiate athletics. NCAA and AIAW both met in January and have given a new *hope* that higher education can regain control of intercollegiate athletics.

NCAA narrowly turned down a modified need based plan of financial aid in which all athletes might receive tuition waivers; but no additional funds unless they had a *need* factor. The vote was 120 against the plan and 112 in favor. This plan, would, of course, help put athletic scholarships into the mainstream of traditionally controlled academic scholarships. (10)

The AIAW Delegate Assembly took a more drastic action in passing, nearly unanimously, a resolution asking all groups governing intercollegiate athletics to consider adopting a uniform policy of limiting financial aid based on athletic ability to a value equivalent to tuition and fees at each institution.

If any of these new approaches, or a similar compromise measure could become a reality, there could be *sanity* and *equality* in all of intercollegiate athletics. We can have not only a women's athletic revolution, but a men's athletic revolution. We all must strive for mutual understanding and the combining of the best of men's and women's philosophical positions and functional programs. We can live in the best times, and in a spring of hope if we can return athletics to one of the vital functions of higher education. It is not too late to seek a better world. A world which brings us to AN EPOCH IN ATHLETICS.

Footnotes

1. Charles Dickens, *A Tale of Two Cities*, New York: Macmillan, 1962.
2. NCAA Chief Executive Officers. "Subject: Report and Recommendations of the Several Issues Invoked in The Adminstration of Women's Intercollegiate Athletics at the National Level." Dec. 3, 1975 (Unpublished Material)
3. NCAA "A Legal Opinion Requested by the NCAA Council for its Guidance and for the Information of the Membership of the NCAA, Nov. 21, 1975 (Unpublished Material)
4. Cheryl M. Fields, "Demands of Women Athletes Rivaling Those of Men", The Chronicle of Higher Education, May 24, 1976.
5. Cheryl M. Fields, "Rules Violations Grow in Women's Sports," The Chronicle of Higher Education. May 17, 1976
6. Charles Henry, Leanne Grotke, and Karol Kahrs, "Bridging the Gap", Athletic Administration, Winter 1975. (NACAD)
7. Joan Hult, "Equal Programs or Carbon Copies?". The Journal of Physical Education and Recreation, May, 1976.
8. Roger M. Willaims, "Outlook: Away with Big-Time Athletics". The Saturday Review, March 6, 1976
9. Patricia Geadleman, "The Title IX Saga" (Part I and II) The Olympian, Oct. and Nov. 1975.
10. Larry Keith, "College Athletics: A Narrow Defeat for Need", Sports Illustrated, Jan. 26, 1976.

THE IMPACT OF KNOWLEDGE UPON PHYSICAL EDUCATORS AND SCHOOL AND COLLEGE SPORTS PROGRAMS

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Having heard the title of my presentation, members of the audience have no doubt surmised already that I have chosen to side-step, at least for the moment, the topic which I was supposed to address — namely, "Forecasting the Future in Sport." If I may digress for a moment, perhaps I can explain why I have side-stepped the original title and have chosen instead a substitute.

Although forecasting the future in and through sport would appear on the surface to be both reasonable and appropriate, it is my contention that the original title itself, like the tip of the iceberg, offers a logical starting point for analysis. Even though we are interested in the important, explanatory variables which reside beneath the surface, we must remember that our method of studying the tip of the iceberg will invariably influence our approaches to studying the remainder of its characteristics. Thus, if our objective (in the name of understanding) is to analyze, describe, and sometimes predict the future of school and college sport programs, then we must eschew the time-honored and tradition-bound "givens" which color surface judgements about sport and sport-related problems.

I followed the aforementioned guidelines in my initial consideration of the topic "forcasting the future in and/or through sports." I knew from the start that the problem could be operationalized because I had previously completed two analyses (Lawson, 1974; Lawson, in press). In fact, the temptation to jump immediately to questions of method and substance was nearly irresistible. And then it hit me. I was about to follow a pattern in physical education which I have condemned from the beginning. Someone else has charged me with a responsibility which I'd accepted, and I was about to complete the task without questioning the question. Once cognizant of this trap, I applied my scholarly brakes and took a

second look at the problem. It was then that the real question emerged.

Why should we be able to forecast the future in and through educational sport? This, it seems to me is the pivotal question. After all, educational sport should represent a form of play, and participation in play and educational sport should be voluntary. Like all play forms, educational sport is supposed to be spatially and temporally bounded and hence, separate from ordinary life. Furthermore, physical educators are purportedly a service occupation, the primary task of which is to provide organized programs which mesh like synchronized gears with the needs and interests of their clients. It should follow logically, therefore, that any study of educational sport's future should focus upon the play preferences of adolescent and college-age individuals and their determination within American society. The rest should be axiomatic. As the play preferences of individuals and groups go, so should go educational sport.

The fact of the matter is, however, that we *are* able to forecast the future through sport. We have already at our disposal investigations which have revealed ways in which sport is affected by and reinforces in return technological, economic, political, social, and ideological variables which represent real world (vs. play world) characteristics (cf. Lawson, 1974; Ingham, 1975; Lawson, in press). Furthermore, there is no apparent reason why we cannot continue to extrapolate from these findings to predict the future of school and college sports and the larger society. But the question which we must confront is not so much one of forecasting the future in and/or through school and college sports, but rather, one of understanding how this type of sport has been altered to the point where it has become a more than adequate barometer for and a mirror of gross changes in the larger society. It is only after we have established such an etiology for sport's transformation that we can attempt initially to correct the course of sport's evolution, and subsequently, to steer intelligently sport's course into the future.

A Note on Methodology

All studies of the future which, like this one, utilize extrapolation must by necessity rely upon a specialized knowledge base. Futurologists and policy experts utilize a specialized knowledge base for two related reasons. On the one hand, such a knowledge base may provide varying explanations for the evolutionary course of, in this instance, school and college sport. Secondly, this knowledge base also affords an invaluable basis for prediction, innovation, and control by occupational or professional groups, in this instance, physical educators. Such a reliance by specialists upon cognitive and theoretical knowledge constitutes as well, according to Daniel Bell (1973), the most important characteristic of what he foresees as the emerging post industrial society.[1] Furthermore, the expert's utilization of specialized knowledge in planning and decision-making is one indication of the on-going tide of what Max Weber called the process of rationalization. By rationalization Weber meant a process whereby forms of social action once governed by affect, tradition, or value become instead formalized by means of rules. In other words, the process of rationalization leads to what Paul Tillich called "the dance of ends and means"; as a result, forms of social action become calculable in quantitative terms, standardized, and predictable. Consequently, the immediate focus of this paper — namely, upon the uses of knowledge by physical educators and its effect upon school and sports programs — can be viewed as an analysis of one part of the process of rationalization.

Following the lead of Robert Lynd (1939), we must also ask: "Knowledge for what(?) and, knowledge to serve whose interests?" Physical educators and other parties interested in sport have acted in the past and continue to act today on the basis of what they themselves determined to be adequate "knowledge." Because knowledge or whatever passes for knowledge exists as images in the minds of people (cf. Boulding, 1973), and anthropocentric lens must be employed to bring into a sharper focus the issues surrounding how perceptions become molded, what forms the images of knowledge

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[1] Whether Bell's post-industrial society shall ever materialize is a matter of some debate (cf Bendix, 1974; Etzioni, 1974). The fact remains, however, that the possibility of post-industrial society looms large in futuristic debates (cf. Gappert, 1974; Kavolis, 1974) Therefore, I've included the post-industrial focus in my title but, only as it pertains to the effects of knowledge upon specialized occupations and professions.

take, and how images affect the behavior of occupational and professional groups. Such a person-centered lens also aids in the examination of sports programs because programs owe a major part of their structure and functions to the motives, actions, and inactions of their members. Thus, our venture in forecasting will have greater explanatory power to the degree that it includes what amounts to an exploratory venture into one aspect of sociology of knowledge.

My strategy for presentation includes first a critical examination of the past-present realities of school and college sports. This critique will be undertaken with reference to ideal-typical models which have been designed specifically for sport. Following the aforementioned critique I will present, albeit briefly, an historical summary of the origins and subsequent institutionalization of sport in schools and colleges. If I may anticipate now a question regarding the use of history in futurology, I have followed C.W. Mill's (1959) dictum that no social study can complete its intellectual journey until it has confronted questions of biography and history and their intersections within the larger society. Finally, I will extrapolate from existing trends to provide specific alternatives for physical educators.

The Contrast Between Ideal and Real

I wish to begin the analysis by presenting ideal-typical models which Bob Morford, a colleague at the University of Washington, and I have constructed for sport. Such ideal models, which may be drawn from an ever-expanding body of knowledge about sport, allow the examination of sport in three distinct sectors: professional-consumer, educational-pedagogical, and participatory-recreational. Like all ideal (or ideal-typical) models, the models for sport which are employed in this analysis fall within the guidelines set down by the sociologist, Max Weber.

Ideal-models are not offered as ethical ideals, i.e., there is no inherent judgment to the effect that the model *ought* to exist in the real world. Quite to the contrary, the fact that ideal models do not correspond to reality at the time of their construction betokens their purposes. Ideal models are first and foremost analytical instruments which can be utilized to earmark problems and to understand better everyday experience — that which is taken-for-granted is brought into a sharper focus by comparison with an ideal model. For example, because the ideal model is ordered logically and consistently, the interplay of ideal and real will often bare contradictions which exist in the real world. Ideal models can also aid in determining the antecedents which give rise to real world events. In view of these purposes, ideal models must represent the products of a free intelligence rather than a missionary zeal. Indeed, any decisions to effect changes in the real world of educational sports should emanate from persons charged with their organization and conduct, but not from the architects and employers of the ideal models.

The three ideal models for sport and their respective characteristics are depicted in table 1. Model 1 represents a professional-consumer prototype. In the professional-consumer model, sport is produced in a manner which allows its expeditious and palatable consumption. Commensurate with the adoption of purposes which are external to the contest itself, external mechanisms for control are employed to insure that the contest is staged properly. Only the best players may participate. The prized outcome of victory and the comparative standings of individuals and teams become of paramount concern to franchises. The franchise must win in order to attract spectators (who participate vicariously) and remain at the least fiscally solvent. Consequently, decisions regarding the outcome of the contest become sufficiently important that they are delegated to master strategists (e.g., coaches, consultants); these strategists become, by virtue of their central role in controlling the contest, the real players in a professional-consumer model. Additionally, the intense desire to win coupled with the inevitable competition over scarce human resources (e.g., superstars) brings with it the need for external regulatory agencies. These agencies include among their functions the tasks of standardizing the conduct of sport as well as adjudicating disputes which may arise among members.

Athletes can be viewed in this model as members of a service occupation. Athletes as workers voluntarily exchange control over the contest for work-related rewards such as fame and fortune which can be earned from the display of their prowess.

In summary, sport in the consumer sector is characterized first and foremost by

business-like organization and conduct. It is infiltrated by real world technologies and external influences. A successful franchise in such an exchange-conscious system is one which maximizes resource acquisition and allocation. Consequently, one may forecast the future of consumer sport as a component of more comprehensive forecasts of economic, technological, and social variables.

Contrariwise, the athlete retains complete control over the contest in Model III, the participatory-recreational model. Whether sought privately or offered under the aegis of public agencies, the opportunity to compete remains open to players of all ages and ability levels. Participants' motives are expressive and include the sheer delight of playing. Because athletes are self-selected, and because sport is pursued for sport's sake, forms of regulation other than peer governance are unnecessary. Thus, participants in this model are true players.

Ideally, participants from the third model, the educational-instructional type, flow as tributaries into both the professional-consumer and the participatory-recreational models. At the same time, the educational model serves its major purpose of developing the personal excellence of the student-athlete. Whereas Models I and III offer strictly the opportunities for performance, the educational model operates under the premise that the athlete's prowess must be developed sufficiently prior to permitting performance in contests. When contests are arranged, this developmentalist perspective carries with it the assumption that contests are repeated trials which are invaluable for learning. Victory becomes in this light a barometer for measuring learning in lieu of an end in itself. Consequently, the league organization (which is appropriate for a sport system in which victory is an end in itself) is replaced by a voluntary, flexible model of organization. The most obvious real world example of a voluntary, cooperative organization is the consortium. The consortium arrangement not only provides opportunities to meet opponents equal to an individual's or a team's prowess, but also, it may facilitate equitable scheduling and the sharing of equipment, facilities, and coaches. All these measures are necessary to provide some assurance that conditional equality will exist between and among contestants. By contrast with the professional-consumer model, in which victory and, in turn, league standings rests upon technological and human resource acquisition and allocation, the conditional equality provided by a consortium insures that performance differences are those attributable to the varying capabilities and levels of training of humans. Consequently, in Educational Sport the contest becomes a uniquely human experience. Finally, consortia are voluntary associations which give rise to relationships which endure only as long as its members wish them to last. Unlike the league organization with its stranglehold on schools for all sports, complete with schedules fixed years in advance, the consortium may be sport-specific and short-term.

The roles of coaches within the educational model are those of teachers or instructors. Coaches might also share responsibility with participants for governance.Presumably, the older and better educated the participants, the greater the amount of control they are allowed to exercise over their training and their contests. As in the participatory-recreational model, the participants decide themselves whether they will participate; there are no external mechanisms for weeding out participants on the basis of presumed meritocratic criteria. As with any educational endeavor, opportunity is equalized with the choice being placed in the hands of the athlete as to whether he/she shall undergo the long and rigorous training which typifies the athletic role. Clearly, the major assumption upon which an educational model is predicated is that this form of sport constitutes a vehicle whereby generalists or liberally educated individuals are developed. By contrast, a consumer or professional enterprise aims at producing via narrow technical training specialists who are vocationally oriented.

Having presented the three ideal models, appropriate and internally consistent policy guidelines may be derived from them. These policy guidelines may then be contrasted with those which are at present operational in educational sports programs.

Table II contains policy guidelines which are appropriate for educational sport juxtaposed with those appropriate for consumer sport. A surface examination of these guidelines by members of this informed audience should provide a sufficient basis for the following observation. A paradox resides in the fact that modern school and college sport programs, despite legitimations which center upon their presumed educational contributions for athletes, conform more closely to the modes of organization and the policy

guidelines for the professional-consumer model. From their modes of funding to their very organization, school sports have been produced in a manner which is pleasing to the consumer. Yet another paradox can be seen to reside in the practice of limiting participation to a select few while at the same time proclaiming the alleged benefits which participants may derive from sport. If said benefits in fact occur, why limit sport participation? Thus, school and college sports justified as education, yet organized and conducted as business contain numerous anomolies. If these anomalies are to be resolved at all, pivotal decisions by those individuals charged with or who wish to influence sport programs. Before we can discuss antidotes, however, we must have a complete record of school and college sport's pathologies. Has school and college sport always exhibited such anomalies? When did school and college sport begin to develop along business lines? I will now take up these very questions.

Policy Guidelines for Educational Sport and for Consumer Sport

Model I Consumer-Professional	Model II Educational-Instructional
1. Squads are cut to allow elitist training and competitions.	1. The opportunity to participate in graded competition remains open to everyone.
2. Coaches are paid for their responsibilities.	2. Coaches in schools are given released time from other instructional responsibilities.
3. Coaches and their expertise as well as equipment and uniforms are monopolized by sponsoring entity.	3. Consortium arrangement allows sharing of expertise, equipment, faculties and uniforms and provides conditional equality between and among participants.
4. Facilities and equipment must be standardized according to agreed-upon criteria. Uniforms, etc. must be color-coded with symbols both of which allow identification of the player(s) by spectators.	4. Only those facilities, forms of equipment and clothing which are necessitated by the sport or in the interests of the participant's safety are necessary.
5. Contests are scheduled during "prime time" (e.g., evenings or on week-ends).	5. Contests are scheduled on the basis of the mutual convenience of participants.
6. Primary producers (coaches, athletes, officials) are complemented by secondary and tertiary producers (e.g., media personnel, personnel for tickets and concessions, security people, etc.)	6. Contests necessitate the presence of primary producers only.
7. Gate receipts, donations, etc. channelled into separate funds for sport.	7. Funds emanate from and donations are returned to a general educational budget.
8. Championship playoffs in which there emerges one winner emanate from systems of leagues and external regulatory agencies.	8. The Consortium system allows initiation and termination of competitions to be arranged by mutual consent.
9. An elaborate system of inducements must be built in for coaches and players (e.g., better jobs, more money for coaches; for athletes, scholarships, potential vocation).	9. The sole inducement resides in the pursuit of excellence by participants.

IDEAL MODELS FOR SPORT*

	Model I Professional-Consumer	Model II Educational-Instructional	Model III Participatory-Recreational
Sponsor	Private Ownership and/or Government	Public and Private Instructional Agencies	Privately or by Community Agencies
Objective	To win, to profit, to propagate national interests	To develop personal excellence of student-athlete	To experience fun of playing and contesting
Intended Audience	Spectators who consume the contest	Student-Athlete	Player
Controls or Government	External: Coach, management, external regulatory agencies	Combined external-internal: Teacher-coach and students	Internal: Peer governed
Financial Base	Consumer-business modes: gate receipts, tax write-off, *et. al.*	Taxpayers and Players pay fees	Personal Fees and Indirect Community Subsidization (e.g., facilities)
Ideological Base	Meritocratic	Egalitarian	Egalitarian
Mode of Organization	League	Consortium	Self-selective
Participant's Primary Motive	Instrumental, e.g., to make a profit, to entertain	Developmental-expressive	Expressive

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The Institutionalization of a Consumer Model for Intercollegiate Sport

The recent work of Berryman (1976) and before him, the works of Lewis (1969, 1970a, 1970b) have been directed toward the roots of modern intercollegiate and interscholastic programs. What these analyses have revealed is that intercollegiate sport was before 1880 a blend of the previously described educational and participatory models; by 1900, however, these programs had become transformed to the point where business-like, commercialized characteristics were visible. Berryman (1976, pp. 810) summarized the following developments which took place in intercollegiate sport over this twenty year period: (1) the roles of alumni, students, and media persons in establishing a consumer market for intercollegiate sport; (2) not only the influx of specialized promoters and entrepreneurs whose business it was to sell sport, but also, the use of sport by presidents of colleges and universities for gaining recognition as well as soliciting income for their general funds; (3) the increasing professionalization of college athletes, and concomitantly, the increasing domination of instrumentalist instead of expressive motives among athletes; (4) ultimately, the utilization of collegiate educational sport by mass media in order to maximize interests in and profits secured from their products; (5) the establishment of formalized leagues and subsequently, of regional and national tournaments (pp. 8-10). Thus, sport programs in many colleges and universities, once relatively unstructured with participation restricted largely to an amateurized elite, began to be transformed to a consumer or big-business model during the period from 1880-1900. Not only did the pace of this transformation to a consumer model become even more accelerated over the next three decades (Lewis, 1969), but also, secondary school sports programs became infested with these same commercialized features (Savage, 1929).

School and college sports also became institutionalized during the period from 1880-1930. Institutionalization could be said to occur when what were once associational sporting activities became instead rationalized instruments for societal socialization and social control. Once institutionalized, these sport programs provided structured opportunities within which social learnings via role playing might eventually occur. In other words, the institutionalization of school and college sports programs brought with it mechanisms for type-casting "individual actors as well as individual actions" (Berger and Luckman, 1967, p. 54). Once engulfed within the framework of institutionalized collegiate sport, the "here-and-now" individual learned to accommodate himself or herself to pre-defined roles and assimilated previously-established values (Ingham and Loy, 1973, p. 37). Thus, the institutionalization of school and college sports programs brought with it a mechanism for school and college sport's transmissibility, prediction and control.

The institutionalization of school and college sports programs brought with it as well built-in resistance to change. But even institutionalized programs cannot be said to wholly exist apart from people. Consequently, in examining both collegiate sport's institutionalization, and subsequently, its resistance to change, we are compelled to ask two anthropocentric questions. Whose ideal and material interests has this form of institutionalized programming served? What were the roles of physical educators in the construction and maintenance of these institutionalized programs?

Prior to addressing these questions we must begin by defining "ideal interests" and "material interests." Both ideal and material interests are group based; separately and in combination, they define and unite the occupational group. Taking the latter first, a group's material interests reside in those factors which affect their economic gains, their political influence, and their overall life chances. Ideal interests, by contrast, are rooted in the status concerns and in the ideological platforms of the group. A group's ideology includes by definition selective, inter-related images of the nature of the individual, the characteristics of the ideal society, etc., and the self-annointed functions and status of the group. But, while it is often possible to separate ideal from material interests for facility of analysis, it must be amplified that a group's ideal and material interests are invariably intertwined. These twin interests act in combination to affect the group's perceptions of problems, the group's conception of knowledge, and certainly the group's course of action in relation to its goals. Foremost among the group's goals, in the Weberian view, are those which are concerned with the elevation and/or maintenance of the group's political, class, and status interests. Whether the goal of the group is to maintain and/or to expand its socio-economic position, the group will develop an affinity for those ideas which converge with the group's previously-established, ideal and material interests. This group-based process involves not only the selective adoption of information by the group, but also, a group-based evaluation-translation of the information to the point where it gains utility for the group. Weber coined the term "routinization" to designate this process whereby a group imports and selectively defines ideas and information which can aid in the maintenance and expansion of its ideal and material interests.

It follows logically from all this that one way to study the transformation of educational sport is to attempt first to isolate within the larger society historical instances of class and/or status upheavals, and then, to identify the groups involved, and finally, to determine the impact of the processes of rationalization, routinization and institutionalization upon physical educators and educational sport programs. Unfortunately, most of the historical studies which have been completed by physical educators have been predictably inspirational accounts and/or chronological summaries of the rise of physical educators and sports programs. Yet, I and a few of my colleagues at the University of Washington are currently knee-deep in analyses which are directed at such different sets of questions. The historical period upon which some of this work has been focused, that of American Progressivism ca. 1880-1930[2], is precisely the same period during which

[2]Students of history will doubtless surmise that these dates are liberal. I have followed the leads of Ekirch (1974), Hofstadter (1955), Savage (1929), and Lewis (1969) in bracketing this period.

educational sport programs became institutionalized. At the risk of putting the cart before the horse, a preliminary summary of some of the salient findings will be presented in outline form.

1. During the period after the Civil War, there arose a new class of wealthy industrialists who came to dominate the economic and social arenas. Correspondingly, "boss" political systems were built upon a rapidly-expanding immigrant base in urban-industrial areas. There arose in response to the parallel rise of industrial-corporate magnates and boss politicians a status revolution of the type which we are seeking.

2. American Progressivism constituted the formal expression of a status revolt. Central actors on this status revolution were businessmen (notably small town bankers, independent entrepreneurs, et al.) and professional people (especially theologians, lawyers, and college professors). Once possessors of status and deference in small towns, these members of the *petit bourgeoisie* saw their status eroded with the rise of urban industrialism. In an effort to regain lost ground and/or to maintain what they had, these people steered a new course of social action (Hofstadter, 1955). They also adopted a modified, eclectic ideology which included a mixture of "Malthusianism, Manchesterian economics, Social Darwinism, Romanticism," and a crude hereditary biology — all built upon a moral platform of Christian love and brotherhood (Lubove, 1973, p. 7).

3. The adoption of conservative economic, social, and political goals by the reformers was perhaps predictable given their Anglo-Saxon, Protestant backgrounds. Their revolt was directed toward the inseparable goals of returning to ethical-moral standards which formerly governed the conduct of an aristocracy and of eliminating waste (itself a moral virtue) by implementing mechanisms for improving economy and efficiency. Economy, efficiency, and the elimination of waste could be best achieved by substituting the expert for the generalist and by installing business management techniques. Taylorian "scientific management" techniques were seized upon as the one best system and implemented in American institutions — often by the very reformers who championed such causes!

4. Consequently, American institutions became shaped to the point where they mirrored the successful business organization. Like the corporation president and the corporate board, there arose superintendents with school boards, college presidents with boards of trustees (or regents), and athletic directors with boards of control. Because managers were trained under the scientific management school and because boards were peopled by successful business and professional types, the Progressive reformers had gained no small amount of influence and control over the conduct of many programs as well as with their form of organization. Indeed, dramatic changes were witnessed in state and local government (Ekirch, 1974), upon public administration (Mosher, 1974), upon charity organization (Lubove, 1973), upon public schools (Cremin, 1961; Callahan, 1962; Tyack, 1974), upon colleges and universities (Hofstadter and Smith, 1968, pp. 893-896), and upon sport (Savage, 1929; Berryman, 1976).

5. Progressive reformers justified these changes by emphasizing that merit, not ascriptive privilege, and expertise, not political manipulation, were the twin pillars upon which the new managerial-technical class rested. This purportedly meritocratic justification was at the same time one which could be employed profitably by the new plutocracy, many of whom were themselves from the same background and were of like minds with the reformers. Consequently, a non-conspiratorial, silent partnership could be formed between many of the reformers and the new plutocracy. Such a partnership could serve to safeguard their convergent ideal and material interests.

6. The reformer's drive for economy and efficiency by means of experts and rationalized management techniques accelerated the process of rationalization. Because rationalization and democratization proceed hand in hand, programs did become gradually democratized. The democratization of schools and colleges necessitated new curricular offerings and expanded social activities — all under the banner

of preparation for life.[3] In the case of state universities in particular, students had to be lured initially, and maintained subsequently by means of non-academic activities, the most notable of which was consumerized sport (Veblen, 1916; Hutchins, 1936).

7. Sports provided for schools and colleges both a means of resource acquisition under the "doctrine of good works" (Berryman, 1976)[4] and an olive branch which could be extended to the community as part of what Abraham Flexner (1930) called "the service station function" of the university. Collegiate sport programs while cushioning the effects of democratization of higher education, served at the same time as a facilitative mechanism. Moreover, sport's position was enhanced further because many alumni were less prone to identify with their alma mater's educational curricula than with their social and athletic activities. Increasingly, alumni from colleges and universities utilized sport as mechanism for identification, and trustees and university presidents exploited sport to appeal to alumni and to people in the surrounding community and state (Savage, 1929). Thus, there arose the previously-designated symbiosis. The increasing consumption of sport prompted, in turn, its consumer-oriented production. Its consumer orientation reflected business interests and necessitated business-like modes of organization and conduct. Legitimated by the sports creed and by the doctrine of good works, educational sport could likewise be extended to an unknowing, receptive public as a striking example of American meritocracy at work. In short, educational sport became in the functionalist perspective a mechanism for social control.

The picture which I have painted is undoubtedly far from attractive as viewed from the eyes of many members in the listening audience. Many of our histories of physical education and sport have tended to paint much more appealing murals in which the roles and goals of physical educators are the primary subjects. The preceding analysis, it may be argued, does not give due attention to physical educators. Therefore, let us turn to the subject of physical educators and examine their roles in the framing of school and college programs in an effort to determine the extent to which they fit within the aforementioned pattern. Once again, I will outline briefly the salient points.

1. Lewis (1969) has chronicled the accommodation of physical educators to the "sports are educational" movement from 1906-1939. The most important factor of all, according to Lewis (1969), was the existence of "highly, organized, well-established, and tremendously popular varsity athletic programs" which invited the attention of physical educators (p. 35). Among the developments in this accommodative process were the following: (a) the merger of athletic and physical education departments; (b) the employment of athletic directors and coaches as physical educators; (c) a change in physical education's leadership as key-noted by the replacement of medical doctors by the new educationists; (d) the adoption of a new philosophy of directed play in substitution for training the body.
2. In the often-overlooked, yet remarkably incisive Carnegie Foundation Report of 1929, Savage (1929) described how the merger of athletics and physical education could masquerade under the rhetoric of "increased faculty control" over athletic programs. Not only local control, but also, control over regulatory agencies such as the National College Athletic Association became vested in the hands of athletic directors and coaches turned physical educators. As Savage (1929, pp. 76-76) observed, athletics had become so complex that they could not be entrusted to mere dilettantes, i.e., students. Rather, so-called expert administration and control via the one best administrative system constituted the goals of the athletic directors and coaches. The result of all this did not escape Savage's (1929) notice.

> It is our intention . . . to suggest that many university or college presi-

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[3]The democratization of higher education was triggered by the Morrill Act of 1862. Private institutions such as Harvard and Yale withstood for some time the trend toward democratization (cf. Berryman and Loy, 1976). Correspondingly, private colleges and universities managed to maintain liberal education at the same time public institutions went vocational-technical.

[4]Under the "doctrine of good works" proceeds from sports were utilized for non-sport, university activities such as building construction, maintenance, *et al.* (Berryman, 1976; Lewis, 1969).

> dents have left the shaping of athletic policies to conferences, committees, or specialists in physical education, who represent not so much the welfare of the institution and its undergraduates as *special interests of one sort or another*, all of which apparently feel *that material prosperity, their own prestige, or professional standing* must be served before other ends can be considered (p. 80, emphasis mine).

Savage (1929, p. 81) continued by stating that the conflict over vested interests begins only when someone or some group foresees the necessity to *control* an activity such as athletics. In the case of physical educators, athletic programs represented vehicles for the realization of personal as well as occupational ambitions.

3. Who were these early athletic directors and coaches? For the most part, they were men who were recruited into an occupation which was formerly dominated by women (Lewis, p. 36). Some were active and inactive professional athletes, some had physical education degrees, and some had academic appointments in other departments. Savage (1929, p. 167-168) lamented that departments of physical education showed the highest number of members who, while possessing the rank of professor, had only a bachelor's degree or no college degree whatsoever. He continued his criticisms by pointing to the parallel fact that no other department in American universities had its faculty appointments so often determined by individuals whose formalized work roles resided outside the institution (Savage, 1929, p. 165). Furthermore, noted Savage (1929, p. 171), the academic status and often tenure of a coach did not prevent his being dismissed by those very outside interest groups who influenced his hiring. Lacking appropriate professional education and the university-based protective mechanisms against outside influences (such as academic freedom), these coaches and athletic directors were those persons to whom "faculty control" over athletics was often granted. Yet, the ideal and material interests of athletic directors and coaches, on the one hand, and alumni and local business groups, on the other, were wholly compatible. Consistent with previously-described pattern of Progressivism, *external* influence and *de facto* control by alumni and local business groups became the rule.

4. So-called "professional preparation" curricula for men and women in physical education were modified to fit athletic programs. As sports programs spread, so did the number of undergraduate training programs based upon sports programs increase (Lewis, 1969). It should be emphasized however, that these so-called professional programs arose *after the fact*, i.e., after athletic programs were firmly entrenched and operating on a consumer basis. Additionally, these occupational training programs were structured in *ad hoc* fashion; after an examination of what coaches and physical education teachers were required to do, undergraduate curricula were structured. The resultant courses of study were therefore more in line with vocational-technical preparation than professional education (Kroll, 1971; Lewis, 1969). The remainder of the pattern was predictable. Entrance into physical education became increasingly selective as coaching became a viable career pattern for athletes. Major criteria for the appointment of coaches were personal athletic performance and past successes as a coach (Savage, 1929, p. 164). Physical educators began to be mass-produced as technicians instead of professionals.

5. In summary, then the development of physical education as a specialized occupation contributed to the rationalization of school and college sport, and conversely, the increasing rationalization of sport contributed to the growth of the physical education occupation (cf. Ritzer, 1975, p. 628). This drive toward professionalization was founded upon a specialized, technical expertise which was to be acquired via college and university training. Yet, the motive for this and all professionalization, was that of acquiring power. In fact, a defining characteristic of a profession is its power base, as reflected in the amount of authority, monopoly, and autonomy granted to the profession by laypersons.

6. If the professionalization of physical education was predictable in view of sport's rationalization, so, too, was the development of bureaucratic agencies for sport's regulation a predictable outcome of the democratization and rationalization of sport. As Anthony Giddens (1972, p. 51) has observed, such bureaucratic forms, while

arising from the necessity "to woo and organize the masses," entail at the same time, the formation of bureaucratized parties whose leaders "hold the real power." Regulatory sport agencies arose as bureaucratically organized protective havens from which members of the physical education occupation could wield their power. While stemming from democratization, such agencies actually served to undermine the democratic process in sport. These agencies were controlled by a specialized elite who acted to increase and protect their own power rather than share it with athletes and others in schools and colleges.

7. Certainly not all physical educators conformed to the mold of coach or athletic director as occupational entrepreneur. For example, Savage (1929, p. 163) gave mention to the fact that some athletic directors and coaches received broader forms of occupational training and consequently, were more preoccupied with a broader philosophy of sports and games. Doubtless many women in physical education, once leaders in this occupation, were also dissatisfied with such developments. However, tall in altruism, this group was short on power and authority.[5] These physical educators (among them women who had seen their intra-occupational status and power eroded) at the least found their protests muted, even more likely altruistic physical educators were victims of co-optation by outside interests groups. The other occupational subgroup, comprised largely by male athletic directors and coaches, while short on altruism, was tall in prestige and power by virtue of their partnership with business persons and alumni. While recognizing this imbalance, Savage (1929) concluded:

> . . . monetary and material rewards from sport are more highly valued than the returns in play, recreation, and bodily and moral well-being. Through the medium of self-interest it affects every person whom it touches . . . (p. 306). With the passage of time, these evils become more difficult to eradicate because of the depth to which their roots have sunk (p. 306).

Thus, some physical educators (predominantly male) not only conformed willingly to the dominant form of school and college sports, but also, they become apologists for programs in order to serve their own ideal and material interest.

8. Finally, many physical educators could be co-opted because their platforms were inherently supportive of the status quo. As Joel Spring (1974) observed physical educators took the political, social, and economic superstructure as given, and sought to provide a cushion for its effects. For example, work proper was not to be changed, but athletics could be used to recreate people for work; the material conditions which contributed to crime and delinquency could not be changed, but athletics could be employed to profitably fill leisure time. Indeed, the fact that "The Administration of Physical Education and Athletics" constituted from the beginning a title for both courses and books reveals much about the incidence of conservatism within the occupation. As Mannheim (1936) observed, a key characteristic of the bureaucratic conservative is that he views all problems as "problems requiring administration, and as a consequence of this selective definition of problems, any subsequent actions which he takes will not upset the status quo.

To summarize the preceding discussion, I wish to re-emphasize four major points. First of all, outside influence and exploitation have constituted the rule, rather than the exception in school and college sports. Secondly, some physical educators have been voluntary, knowing partners in the harnessing of sport to satisfy personal ambitions and occupational goals. Third, while it is accurate to state that other physical educators have been more altruistic, it is nonetheless the case that they have been either victimized by co-optation or have been protesting without power. Fourth, apart from internal schisms physical education's growth as a specialized occupation has been founded, both ideally and materially, upon sport. In short, the major question in physical education has not been so much one of whether physical educators should harness sport, but rather one of what ends and interests could sport be employed to serve. Thus, the established

[5]For example, Berryman (1975) noted that many physical educators unsuccessfully protested the movement toward school- and community-based preadolescent sport.

pattern is one wherein sport becomes an instrument to achieve other ends or goals.[6]

In *The Old Man and the Sea*, Hemingway (1952) portrayed instrumentalist, commercial parasites as sharks, and, thanks to "Jaws", the metaphor has enriched meaning today. School and college sports once took place in a play-world whose boundaries constituted shark gates. Once an opening in the gates could be found, the sharks began to come in to feed off sport. Physical educators, instead of mending the gates and warding off the sharks in a combined effort to protect school and college sports, took the form of sharks themselves. Many even organized themselves bureaucratically to make certain that they could maintain their share of the kill.

The Professionalization of Physical Educators and the Hidden Paradox

Looking at the problem from today's perspective we must ask: How can members of an occupation which prey upon sport like sharks espouse at the same time service ideals and ethical-moral values? Clearly, the most important characteristic of a service profession resides in the extent to which its body of knowledge, its professional skills, and its modes of operation are consistent with its service ideals or altruism. Yet, we have in the case of physical educators an occupational group which offers to lay public elaborate legitimations for sport participation, but whose modes of operation undercut in no small part the realization of the very values which are offered in sport's behalf. The fact that this occupational paradox remains for the most part hidden reveals much about the professionalization of physical educators.

To reiterate, physical educators did not enjoy the luxury of constructing sport programs in relation to ideal models. Rather, physical educators had to accommodate themselves to previously-existing, commercialized school and college-sports programs. Having become involved after the fact and yet, having a stake in sport, physical educators became apologists for, rather than architects of existing conditions. Certainly, they located their occupational training in colleges and universities. They applied the term "professional" to this training as well as to their associations and their range of activities. Yet, their service was directed in standardized, technical fashion toward an existing order of things, instead of toward a personalized service offered to *individuals* (which is characteristic of service professions). In short, physical educators have been a profession in name only (Morford, 1972), and such exercises in occupational self-delusion have helped to keep paradoxes under the rug.

The routinization of ideas by physical educators constitutes still another mechanism whereby an occupation's tacit assumptions may go untested and its modes of operation may remain unchallenged. Physical educators have selectively imported ideas and translated them to solidify current images of knowledge and practice. Scientific knowledge and technologies designed either to improve athletic performance (e.g., new training methods) or to solve administrative problems (e.g., "problem athletes and how to handle them") occupy center stage. The object has been to perform more efficiently those tasks which technicians have always performed. Even more revealing of the process of routinization in physical education is the dearth of courses which are designed to enhance practitioners' understanding of play in its various and multiple forms. Perhaps such courses are viewed by physical educators as lacking immediate application. More plausibly, physical educators may have accepted as part of their anticipatory socialization the assumption that they are overseers of directed play; therefore, the study of play, game, and contest may be viewed as a redundancy. Whatever the explanation, the failure to incorporate the study of play in occupation preparation has itself patently served to reinforce the status quo. Additionally,

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[6]Moreover, there are studies which indicate that the instrumentalization of male-dominated school and college sport continues today. Sage's (1975) recent review of the career patterns of college coaches sheds light on how coaches move up the school hierarchy to positions of prestige and power. Indeed, athletes themselves may utilize sport for instrumentalist designs. From the professionalized play attitudes of adolescents (Webb, 1969, Petrie, 1971), to the heightened college expectations of high school athletes (cf. Rehberg and Schafer, 1968), and presumably, to the vocational designs of college athletes, one may support the case that there exists the opportunity to utilize sport for extrinsic purposes.

the routinization of ideas by physical educators has added to the social status of sport programs.

Paradoxes can also remain hidden when occupational groups become dominated by "groupthink" (Janis, 1971). Groupthink occurs when "*concurrence-seeking* becomes so dominant in a cohesive ingroup that it tends to override a realistic appraisal of alternative courses of action" (Janis, 1971, p. 43). Groupthink involves *nondeliberate* suppression by group members. It can be said to be nondeliberate because the suppression of critical thoughts is attributable to the degree which members have internalized group norms (Janis, 1971, p. 44). Groupthink results in soft lines of internal criticism within the group as well as the elevation of norms such as loyalty and *esprit de corps* at the expense of independent, critical thinking. Groupthink is quite likely to occur when a group over-commits itself with missionary zeal to a time-withstanding goal. Finally, groupthink tends to culminate in dehumanizing actions (yet, in the name of service to humanity) against out-groups. Thus, aside from the fact that groupthink defeats any movements toward self-scrutiny within the group, it also works against a group's service ideals.

Extrapolations From Existing Trends

It has been established, then, that modern school and college sport programs, when compared to an ideal model for educational sport, exhibit fundamental anomalies. Indeed, physical education as an occupational group also exhibits internal contradictions; these internal contradictions are, in turn, related to those found in sport. Such fundamental anomalies have a direct bearing upon the future of school and college sport. Will they remain hidden, at which point sport programs may remain affected and physical educators may conduct "business as usual?" Or, will these anomalies become identified and subsequently, resolved? In order to answer these questions regarding sport's future, one must look for potential sources of innovation in the more immediate past-present. Have these potential sources of innovation affected sport and physical educators already? Is there any promise of their influence in the future? Let us examine five potential sources of innovation and offer predictions after extrapolation from existing trends.

The first major source for innovation is constituted by groups which have been targets of discrimination in the larger society and in sport, and which have made concerted attempts to alter both. Clearly, women and black people fall into this category. Both have been discriminated against on the basis of ascriptive characteristics (gender, skin color). Both groups have placed sport at or near center stage of their protests.

As Daniel Katz (1974, p. 171) noted, black people are potential carriers of a revolutionary dynamic in American society. They possess a group identity based upon common fate, a common culture, and a history of being labeled an out-group by white society. Yet, a revolution by blacks in sport or in the larger society remains unlikely. The problems of blacks are as much material as social, and a resolution of material conditions cannot be effected by separatism (Katz, 1974). In partnership with sympathetic whites, any innovation stimulated by blacks will probably be reformist instead of revolutionary. Indeed, the pattern to date in sport supports this thesis. Granted, concern has been directed toward the reforming of the bases for positional assignments and toward elimination of quota systems. There has been a call for black coaches. Purported biological differences between black and white athletes have been in part debunked (Edwards, 1973). Furthermore, Edwards (1973) has called attention to the limited opportunities for blacks to achieve socio-economic mobility via sport. He has suggested that blacks would be well advised to choose from the beginning other careers than that of an athlete. But there is little in any of these proposals which could result in a radically restructured form of school and college sport. Thus, it can be predicted that the *actions of black people alone will not alter dramatically either the future operations of physical educators or the future organization and conduct of sport programs.*

The grievances of women, on the other hand, are as much social and psychological as they are economic. Their drive is for conditional parity. Their efforts are directed at exposing the irrational and illogical bases for and the harmful effects of their tradition-bound, cultural role prescriptions. Once again, the plan for innovation and the legislation which support it are essentially reformist. Despite incidences of revolutionary rhetoric, the intent is not to radically restructure the system, but rather, to obtain an equal "piece of the action." Applied to sport, this reformist drive falls somewhere between the unconstitutional

"separate-but-equal" doctrine and its up-dated "separate-but-comparable" counterpart. The consumer organization for sport — complete with leagues, scholarships, etc. — should remain for the most part unchanged, but women should gain a slice of the pie. In short, the drive for equality in the larger society as well as in sport has not been viewed as part of a zero-sum game.

Within the physical education occupation, women have been and will doubtless continue to be active participants in the drive for parity. They have formally exposed and subsequently, debunked myths regarding the female athlete. They have authored and steered through reformist proposals on their own campuses. They have pointed out violations of equal rights. Often, they have been instrumental in initiating lawsuits against male antagonists. And why not? While granting altruistic motives to some women in physical education, who stands to gain most from the drive for parity? Head coaching positions, athletic directorships, influential positions within regulatory agencies, and the like are what they are on the basis of a commercialized organization, and not on the basis of the gender of the occupant. These occupational roles will accommodate women as well as men. Obtaining a major piece of the action, then, is quite in line with the ideal and material interests of physical educators who happen to be women. One doesn't upset the applecart and thereby ruin all the apples if one's goal is to eat a fair share of them. Consequently, we may predict first that *the women's movement will expand the base of sport participation, but will not affect the consumer organization and conduct of school and college sports*. We may add that if men continue to give ground to women only grudgingly, if at all, many of *the most important policy decisions regarding sport will be made in the courts, in which instance legal standards of equity and justice, not professional knowledge about play, will constitute the key variables*. Finally, we may predict that *women in physical education will be successful in obtaining positions of privilege of power in the consumer-oriented network*. The important point remains, however, that these predictions, whether taken singly or in combination, offer little hope for the realization of a form of sport which from the standard of the ideal model is educational.

Aside from women and blacks, a second potential source of change arises when new generations question existing institutions. The most recent instance of this was the case of the New Left during the 1960's (which manifested itself in relation to sport under the banner of the so-called Athletic Revolution). Since more than a decade has gone by since the initiation of the athletic revolution, it is logical in attempting to make projections to look for the immediate changes which the Scotts, the Hochs, and others have helped to engineer. Not only does one fail to find tangible changes which may be attributable to the Athletic Revolution, but the revolution itself seems to be largely forgotten. Alan Ingham (1976) has discussed at length the New Left and its influence on sport. As he noted, proponents of the athletic revolution offered only criticism from the outside. They possessed no comprehensive social theory within which they could anchor their criticisms. Taking pot-shots at sport from the outside and lacking social theory, they possessed no views on praxis, i.e., the activity by which individuals may simultaneously transform the world, including sport, and aid in their own self-development (pp. 245-247). Thus, we may conclude and at the same time, predict *that the athletic revolution, whether dormant today or altogether dead, has not stimulated innovation in sports, nor is it likely to stimulate changes in the near future*.

A third potential source of innovation is the availability of a key variable in consumer sport — money. Inflation has cut further in to what were already austerity budgets. Monetary pressures have increased during the same time when women have pressed for equal rights. In fact, it might be argued that minor alterations in consumer sport, while attributed to the women's movement, stem as much if not more from budgetary constrictions. Whatever the case may be, the fact remains that the result of the combined pressures has been to expose the kingpins of school and college sports. Because the concepts of "major and minor" sports are no longer in vogue in physical education, new labels — "revenue-producing" and "revenue-consuming" — have been substituted. As a consequence, certain revenue-consuming sports have fewer if any scholarships. Some of these sports even provide mixed teams, i.e., teams include both genders. Nevertheless, the modes of organization and conduct for revenue-consuming sports remain largely those of a consumer operation. And it goes without saying that revenue-producing sports have not changed at all. As the dictum goes, "we shouldn't bite the hand which feeds us." Therefore, we may conclude and predict *that inflation and budgetary austerity will not by themselves*

result in major changes in sport programs or in the physical education occupation.

The fourth and fifth potential sources for innovation might be viewed as opposite sides of the same coin. The one side, the "new consumerism" (Gartner and Reisman, 1974), culminates in greater degrees of de-professionalization.[7] The other side, expanded knowledge production, might result in extreme professionalization in the form of technocratic elites. Both sources of innovation, i.e., the new consumerism and expanded knowledge production, constitute the most important potential sources for innovation, whether among physical educators, or in sport programs.

The new consumerism is founded upon a waning of public trust in the professions. Involved in de-professionalization are: the erosion of a profession's monopoly over knowledge, the undercutting of public trust in the profession's humanitarian ethos and the questioning of the profession's autonomy, authority, and status (Haug, 1975, p. 202). De-professionalization can be attributed in part to the greater numbers who have received public education and who possess increasing sophistication regarding matters professional. Furthermore, consumer access to both the academic and the experiential knowledge of the professional is also increasing. Already, there are books for laypersons which criticize traditional roles and goals of athletics (Holt, 1972; Leonard, 1975). There are books on principles of training and conditioning (Morehouse, 1975). Ralbovsky's *Lords of the Lockerroom* even provides guidelines which parents may employ to evaluate coaches and sport programs. Experiential knowledge is itself a widely distributed commodity, particularly in athletics. In so far as prior experience as an athlete constitutes a pre-requisite for as well as a determinant of coaching behavior, the monopoly and claims to autonomy of coaches are progressively undercut as more athletes accumulate personal experience.

Will physical educators attempt to protect their turf against the assault of consumer advocates? Or will physical educators fuel the process by attempting to better educate laypersons, and as a consequence, begin to share decision-making with them (cf. Habermas, 1970)? These are questions which pivot around the altruism of physical educators. Given the identification of anomalies within their occupation and in their programs, will physical educators choose service or self-interest? Will they try to rid themselves and their practices of anomalies by adopting strategies for change, or will they sweep these anomalies under the rug? Depending upon the actions or inactions of physical educators, there appear to be at least two predictions. (1) *By choosing the service ideals and by joining the consumer vanguard, dissenting physical educators may help to engineer in the future major changes in sport programs as well as within their occupation.* Specific tasks which some physical educators might assume in this light are predicated on both service ideals and the unity of theory and praxis. These include: (a) educating the lay public about the waning of play in sport and about how sport has been commercially rationalized; (b) protecting and preserving the play of adolescents against outside exploitation; (c) as Savage (1929) suggested returning control of sport to students. On the other hand, (2) *by clinging to self-interests, physical educators will be among the targets for the consumer vanguard. If successful, the new consumerism will result in the further de-professionalization of physical educators; and, more assault waves will be directed at the legitimations for and organizational structures of school and college sport programs.* The success of the consumer vanguard rests in turn upon the extent to which their activities to change reality are supported and directed by theory. And this leads us to the other side of the coin, that of knowledge production.

Where will the new consumerism get its knowledge about physical education and sport? As Robert Lynd (1939) foresaw so well, the social sciences in particular can play a pivotal role in studying and re-making all aspects of American society. But as Birnbaum (1969) has lamented, the scientific, the technical, i.e., these forms of knowledge considered "practical" occupy center stage in American culture, while the social sciences and humanities are relegated to the perimeter. The American preoccupation is to do better what has always been attempted, i.e., to further rationalize actions; as we have seen, this is a characteristic of physical educators, too.

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[7]The de-professionalization of everyone (Haug, 1975) constitutes of course a countermovement which could forestall the emergence of Bell's (1973) post-industrial society.

Nevertheless, there are an increasing number of people who are studying either the Sociology of Sport, or the History of Sport, or the Philosophy of Sport. Knowledge in these areas may be pursued in one of two ways. One, it may follow missionary lines. In this instance, current legitimations for sport may be made more consistent, and/or practices by physical educators may be further reinforced. Such exemplary developments often result in further elaboration and systematization of that which already exists, rather than an alteration of it. But this is a predictable outcome from research when the investigator has an ideal and/or a material stake in the outcomes of his research.

On the other hand, investigations in the social sciences may also proceed without strings attached, i.e., as part of what Lynd (1939) calls *free* intelligence. Inquiry becomes free when investigators have nothing to lose in asking questions, and nothing to gain other than enhanced understanding in answering them. Such free intelligence is more characteristic of a discipline than of a profession.

How much free intelligence exists in physical education? One answer is that so long as physical education remains a strictly professional field, most free inquiry will take place outside rather than inside its circles. Consequently, any knowledge which is generated which has the potential to debunk or to effect structural changes in school and college sport may be more available to people outside rather than inside physical education. It is in this light that the generation or knowledge merges with the "new" consumerism. It is possible to predict, therefore, that *any major changes in the modus operandi of physical educators and in the structure of sports programs in schools and colleges will probably be forced by outside pressure groups who, ironically enough, may well be armed with more salient theory and research about play, game, and contest than physical educators*. This prediction does not deny the efforts of isolated individuals in physical education and/or entire physical education departments to establish disciplinary authenticity and to engage in free intelligence. The fact remains, however, that such efforts constitute the exception rather than the rule. Additionally, the published works of said scholars usually appear in scholarly journals other than those in physical education. And finally, it should be re-emphasized that physical educators do not now nor have they ever possessed full control over sport in schools and colleges. Therefore, even if physical educators desired to remake sport as an educational enterprise, it would require the support of consumer groups and/or other professional groups which posess more power.

A Concluding Note

I wish to conclude by stating that when I accepted the invitation to speak I had to make a choice between two alternatives. I could have chosen to complete a normative forecast. Future studies which include normative ideals are usually received much more enthusiastically than those which, like this one, utilize extrapolation. It is always much more pleasant to envision what could be than to confront day to day realities. Realities are often harsh. The same realities mark where we've been, and they signal where we're going. They force us to examine ourselves as we really are, not just as we want to be. But we can learn much about ourselves and our occupation by answering questions which arise from an examination of past-present reality. How much do we want to know? How receptive are we to internal and external criticism? Is there a point at which knowledge is considered dangerous? Should a profession be required to solicit feedback and implement corrections in its course of action? And finally, is there room for free intelligence in physical education?

Yes, I could have pleasantly massaged your ears with grandiose normative forecasts. But when the two roads diverged in my yellow wood — I like Robert Frost — took the one less travelled by, and I am the better for it. I hope that you too, have profited from my venture into social forecasting.

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A REACTION

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Introduction

If most of us thought we were to view only the top of the iceberg, then each soon forgot . . . for Professor Lawson has taken us well below the surface on an ever probing search for meaning of the impact of knowledge upon physical educators and school and college sports programs. I, too, prefer the less travelled road to true intellectual exchange, but in the quest for knowledge I sometimes wonder if there isn't more than a little identification with "JAWS" (shark) in each position we take.

There are pitfalls in any method the historian, sociologist, or philosopher takes to approach a topic. In fact, it matters little what method the young professional follows, if he acquires the necessary tools of research and a sense of balance, and if he possesses an overriding urge to get at the truth. Perhaps this is what Dr. Lawson has attempted to reveal to us today . . . in that the principal task that he set for himself was not the easier of the two roads. A normative forecast might have given us "what we want to hear". However, the influences derived from the historical perspective, interwoven with the psycho-social changes resulting from the industrial society to the shimmering promises of a post-industrial society have aroused our interest. We may certainly hope for results which will focus attention on the often unobserved trends of school and college sports programs in the late 1970's.

Lawson strikes me as having staked out some fairly well supported ground for debate. His principal objective today seemed to be an attempt to understand motives and objectives of individuals and groups, regardless of our personal reactions to such motives and objectives. He pointed out mistakes (and there appeared to be many) as well as achievements (and there seemed to be few) of the professional leadership and societal movements . . . especially as they relate to the 1880 to 1930 period in the professional development of physical education.

Balance

In a word, when and where did physical educators lose the balance? Are we totally responsible? The evolution from service ideals (perhaps personal and intrinsic) of occupational goals (often self interest, power and extrinsic) has been characteristic of societies throughout the ages. Agreed that one must look critically at the past-present realities as predictors, is not Lawson saying, "The past is prologue?"

Perhaps Lawson was asking . . . Are we not, after all, living in an age when most of our professions and institutions, have lost their balance? Have we reached a watershed in the transition from industrial to post industrial society, and are forces at work re-shaping the area of which we are a part. No longer can physical education, higher education, or society itself, assume that we are on the Yellow Brick Road bound for the Land of Oz. But rather, like Frost, we are approaching a divergence in the path through the woods of the future . . . only later will we know the right and wrong of the path we take. Are we honest with

ourselves? Do we fear tomorrow in the professional roles? Will the in-group accept the 'out-group? Will the out-group become power hungry? Will the "few" disciplined individuals replace the "many" professional individuals? Could the answers for the futurist lie in what any true historian demands . . . the quality of preserving balance?

Historical Perspective

I grant Lawson his points especially in the salient findings of the historical perspective. My major question, however, lies in the discussion of American Progressivism. Having studied with Lawrence Cremin I do not wish to debate this issue. But, I would point out that while Professor Lawson's findings bring him to the conclusion that "Business Management" techniques used in school and college sport programs are perhaps less than desirable, we cannot ignore the pressures of the American meritocracy at work in higher education, in general, as well as physical education and sport, in particular.

It would be unusual, indeed, if our profession had escaped the pressures which — as Professor Lawson observes — have reshaped most of our professions and institutions. What about management by objectives in evaluating faculty; the dilemma of teaching versus research; the hierarchy of academic rank; the pecking order of tenure; the prestige seeking in the department; the "so-called" faculty control; or the status within the power structure of the institution. Perhaps we have yielded to pressures, and perhaps we have snarled ourselves in bureaucracy along with the rest of society, but shall we cop out by turning our "mess" over to technocrats, bureaucrats, MBO persons, or are we with a sense of balance and a consideration for a multitude of ideas, going to ventilate our own discipline, profession, area, borrowing from history, the social sciences, philosophy and whatever to re-tool the future?

The bureaucracy throughout higher education is no different in that the power base of who has the authority? Who has the monopoly? Who has the autonomy? can be extended to who has the vested interest? This control, and need to control, not only applies to coaches and athletic directors, but to college presidents, deans, department chairpersons, and perhaps also to the academic discipline model and the professional model. Ego trips to realize personal goals as well as occupational ambitions are not confined to athletics and sports, but are characteristic of most aspects of the post industrial society.

We have unconscientiously converted human and physical resources into power to achieve significant results. The "power" revolution has brought with it "more organization, larger organizations, more bureaucracy." (Johnson: Personian theorist, 1969). The power structure as it relates to school and college sport is a part of the general environment. The question of the distribution of power within a system can easily be answered by "who makes what decisions at what time." (Zeigler, 1975) It is important in characterizing an organization to determine whether the general environment in which it functions is marked by dictatorial or democratic patterns of power dispersion. I agree with Lawson that the degree of democracy in a society can be determined quite quickly by ascertaining "who participates how deeply in what." (Lewis, 1974).

Ideal Models for Sport

Lawson and Morford models for sport are well defined and have been well reviewed in the literature. A glimpse of role identification indicates that "we learn fast" in the institutionalization of school and college sports. True the group interest as well as self-interest in politics, economics, life chances, status, ideology have affected the perception and created some patterns in school and college programs.

The three models, as explicated by Lawson, do provide comprehensive and clarifying criteria for ascertaining discrepancies which exist between the "real" world college and school sport programs and the model selected for comparisons. Lawson states that the models themselves were not ethical or moral in scope, and yet he seemingly has posited that the model most appropriate for development of sport in schools and colleges is the "Educational-Instructional" model, Number II. On what grounds can he choose to advance that particular model as a framework for change? He has not justified his basic value assumptions prior to seemingly selecting one particular model as the "ideal".

It is true that the "Educational-Instructional" model sounds appropriate to school and college sports. However, Lawson continued to propound that "educational sport should represent a form of play" and that "participation in play and educational sport should be

voluntary," the third model, "Participatory-Recreational" seems to be more stongly suggested as the framework with potential for guiding change. It is difficult to ascertain exactly what Lawson defines as play and play forms. It would likely make a difference as to which model was selected as a framework for changing school and college sports programs if he could clarify the constructs on which his ideas concerning play are based. (Brockmeyer, 1976)

Lawson's apparent value position on the appropriations of the "Educational-Instructional" model for changing school and college sport programs is confused by other rather inconsistent statements. Lawson states, and I tend to agree, that a paradox exists in that modern sports programs in schools and colleges are exhorted for their "presumed educational contributions for athletes" and yet are organized and conducted as business along the lines of the "Professional-Consumer" model. Yet, if sport in schools and colleges is to be focused upon the needs and "play preferences" of the clients, it seems reasonable to assume that the "preferred play forms" would be the culturally defined and popular "Professional-Consumer" model sports.

Finally, it seems that in concentrating his efforts on pointing out discrepancies between the "professional-consumer" and "educational-instructional" models, Lawson has placed a higher value on the "educational-instructional" model as the framework needed for school and college sports programs. His comments regarding the central role of play in sport, the desirability of voluntary participation, and his contention that current practices limit opportunities for sport participation for large numbers of people, suggest the third model, "Participatory-Recreational", as a framework which could fulfill the goals of unlimited, voluntary participation in the play forms of sport. Yet, Lawson does not even suggest that this model may hold potential for school and college sport programs. (Brockmeyer, 1976.)

The Female in the Models (Roles)

Whereas the female in the culture has (in the past) identified more specifically with the "educational-pedagogical" model, the futurologist might rationalize that the female image in these models will be drastically changed. Of course, we already observe these patterns occurring. Not only will the female professional student, but also the female professional leader take advantage of these anomalies that Lawson has identified. In fact, one might predict that the female — by the 21st Century — will predominate the three model roles. The women's movement has two problems — minority women are not involved, it is mostly upper middle class whites, and also it has exaggerated expectations of women to unrealistic levels. Therefore, women will probably run things the same way as men! "If women succeed because men let them, then their views will have been shaped by the men." (Kreps, 1976).

If the "professional-consumer" model depends on economic, technological and social variables, then the female may eventually dominate the model. The female, especially women under 35 are seen as "gung-ho" career women (Kreps, 1976). They have different expectations. They remain single longer, divorce more often, enter professions at all ages, work the same as men, are educated the same as men, and in general, if present trends continue, we will find more females, more often, in the market place. With somewhat mixed emotions, I agree with Professor Lawson that women will drive to gain new professional opportunities. Thus, an increase in the "professional-consumer" model.

The Athletic Revolution

Professor Lawson states that the athletic revolution and the New Left of the 1960's have left us very few tangible results; thus, because it is "logical" in attempting to make projections to look for immediate changes, we can dismiss them as a force in the future. The New Left and the Athletic Revolution were probably unsuccessful in the 1960's because so many of the participants or if you prefer "radicals" lacked any clear concept of history, and they saw their country "in that sort of deep-reaching revolutionary situation that leads to profound alterations of the social and political system." (Chatelain, 1976).

However, I would suggest that the ideas of the Athletic Revolution are presently to be found in the hearts and minds of thousands. More deeply than ever we do not understand a system based on injustice and a hatred for the weak. Almost daily there is a decrease in the communication between racism followed by an increase in distrust and suspicion. If we

cannot develop natural trust, the failure will not only affect sport — it will destroy our society.

Can we continue to support a system that cares nothing for the participant, a system that has the felt need to satisfy spectators, a system that spends hundreds of thousands of dollars on an athletic program, and a system that destroys by its competition the dignity of our fellow men and women. Can we continue to tolerate a system which produces artificial differences between men; a system that teaches us that our success is based on another's failure? If revolution means a break with the past, then certainly the Athletic Revolution has not had many visible effects, but ask yourself how many of you has it changed and if not you, what about your students? (Chatelain, 1976).

Expanded Knowledge Production

Lawson advances the idea that major changes in the structure of sports programs in schools and colleges will be forced by outside pressure groups. He earlier indicated that this may be the result of physical education's failure to move to a disciplinary model from a professional field model. This is likely a realistic assessment, but whether the theory and research on play, games, and contests done by persons outside of physical education will be more salient because it has resulted from "free inquiry" (Lynd, 1939) is a debatable question. Lawson reports that social science investigations into school and college sports programs may proceed "without strings attached." He continues that "inquiry becomes free when investigators (in this case the non-physical educators) have nothing to lose in asking questions and nothing to gain other than enhanced understanding in answering them." (Lawson, 1976) This concept may be more characteristic of a discipline than a profession, as he says. However, it fails to take into account the idea that a culture of scholars working on a problem generally come from a particular paradigm of conceptualization about an area of research. (Kuhn, 1962) As a philosopher of science, Kuhn pointed out that qualities such as "free intelligence" are very unique and often revolutionary in the progress of science. He indicated that most often a field of study is organized around an accepted conceptualization from which research proceeds. If this is indeed the case, it would be hypothesized that social scientists who investigate school and college sport would be operating from a paradigm that is the current "modus operandi" in this culture, the "Professional-Consumer" model of sport programs. (Brockmeyer, 1976) Perhaps the revolution would be better coming from within the discipline of physical education as contradictory research findings suggest and support a new paradigm of school and college sport.

Post-Industrial Society

Whether or not the post-industrial society will materialize as forecast it is obvious that the occupational and professional roles are affected. Is Lawson suggesting that we have been technicians instead of professionals? If so, are we so different from the hierarchy in other segments of higher education? Yes, we do continue to apologize for our existence . . . Does Lawson think perhaps we should? The impact of rationalization-routinization-and institutionalization is real. Therefore, will we resist change, ignore change, accept change, or direct change? From a purely personal standpoint, I think that we were able to build a great industrial society, because we had a relatively open society. The much tooted "explosion of knowledge" and the production of specialists, professionals, and bureaucrats plus a surge in population has led to a complex society which more and more is closing itself in. Is this a point that Lawson also is making? This means that more and more we are restricting the channels for real communication, more and more we are resorting to rationalization. Our strength and our success have resulted from openness and free-flow of ideas. Many of our problems are directly related to closing in and the Lemming-like drive toward more and more specialization.

In closing, I commend Professor Lawson for his presentation. There is an old Chinese proverb that runs like this "to forecast is dangerous business . . . especially when it pertains to the future." Perhaps we both avoided this pitfall, but again we also may have avoided coming to grips with any central idea. The function of a great profession is "to maintain a tradition while transforming it" (Lewis, 1974). I agree with Lawson that there exists a lack of trust, that we need to arrive at shared decisions that may help engineer change, that the layman needs to be educated in the study of school and college sport, that we need to protect

the adolescent, and return the control to the students.

Is it possible to return to 1880? — certainly not — and who would want to? Is it practical to think that American culture will accept such change? — I do not know — but we need to. If successful, will we deprofessionalize the profession? — perhaps — and can we live with what we then have? The transformation of patterns of school and college sport programs are present. Difficulties have arisen in the management of the transformation. There are group "hang-ups" and individual "hang-ups" . . . mostly human barriers which result in conflict of interest. The question of goals for the future is of utmost importance. Who will set these goals? The disciplinarian, the professional, the administrator, the faculty member, the coach, the student?

Of course, school and college sports programs yield to societal pressures — they always have and they always will. Therefore, it is important that those who are pressuring be knowledgable. Mutual striving is essential. Open communication is demanded. A school and college sports program must be built on shared perceptions, mutual trust, free, intelligence, and faith in the integrity of all parties. This, unfortunately, is where Lawson sees that we may have our most difficulty in the future.

Thank you for side-stepping in the yellow wood . . . we are the better for it. Papers like those of Hal A. Lawson make me believe that perhaps we are coming — or have come of age. The journey may be exhausting, but it is exhilarating.

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A REACTION

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I would like to thank Hal Lawson for sharing his paper with us. As he profited from his journey, I too profited by his trip, and consequently, by my own excursion. I must admit that when I was approached to react to a paper by Lawson, the original title, "Forecasting the Future in Sport", I was pleased but I did chuckle, as I thought of all possibilities in order to prepare myself for this presentation (I have always wanted to forecast). Would I start with the crystal ball, covered with a black scarf (or red or blue — one has to be cautious because the research regarding one's personality or moods could be a dead give-away. Should I consult Jeanne Dixon, or wait for the words of the forecaster Lawson? Needless to say I did none of these. Without knowing the direction Hal was taking, I capitalized on the approach he mentioned, in attempting to study the future of sports. Also, to use the phrase (since I am an historian) I studied the past, assessed the present, in order to anticipate (predict) the future.

Let me review the prediction of the Futurologist Lawson.

Predictions:

1. "the women's movement will expand the base of sport participation, but will not affect the consumer organization and conduct of school and college sports."
2. "women in physical education will be successful in obtaining positions of privilege of power in the consumer-oriented network."
3. "the athletic revolution whether dormant today or altogether dead, has not stimulated innovation in sports, nor is it likely to stimulate in the near future."
4. "inflation and budgetary austerity will not by themselves result in major changes in sport programs or in the physical education occupation."
5. "by choosing the service ideals and by joining the consumer vanguard, physical educators may help to engineer in the future major changes in sport programs as well as within their occupation."
6. "by clinging to self-interests, physical educators will be among the targets for the consumer vanguard. If successful, the new consumerism will result in the further de-professionalization of physical educators and more assault waves directed at the legitimations for and organizational structures of school and college sport programs."
7. "any major changes in the modus operandi of physical educators and in the structure of sport programs in schools and colleges will probably be forced by outside pressure groups who, ironically enough, may well be armed with more salient theory and research about play, games, and contests than physical educators."

Lawson with reference to Bell states that we are in a post-industrial society.

> Industrial society is the coordination of machines and men for the production of goods. Post-industrial society is organized around knowledge, for the purpose of social control and the directing of innovation and change; and this in turn gives rise to new social relationships and new structures which have to be managed politically.
>
> This commitment to social control introduces the need for planning and forecasting into society. (Bell, 105).

We are under the assumption that physical educators (and/or sport educators) need to organize their efforts around knowledge, for the purpose of social control, which will direct our innovative changes. As you surmised, Lawson has criticized our actions or lack of actions. We have not been in the forefront — in fact it appears we have been and are reactors and not actors. So what Lawson is saying is that we need to get with it — be the innovators for change in sports programs or we will lessen or lose our influence to outside pressure groups and to those with wealth and power who will lead or assimilate the area of our

speciality. And, if this happens, the ideal model for sports may be the "Professional Consumer Model" led by organizers whose intent is to profit — materially. Hence, back to a technocratic influence in sport. And, I agree.

I will go one step further in predicting that sport does have a future. The question of involvement, leadership, and innovation, are points to contend with regarding society and more specifically women. Female physical educators cannot sit back and say Title IX will take care of us, *it will* give us a "piece of the action." The problem however, in doing so, is that we are not defining for ourselves what the action should be, but are accepting the status quo, and working towards developing equality in the achievement of gaining a piece of the action. To capitalize on receiving a piece of the action we have to be leaders in defining the action. We cannot stand by and not play a significant part in this post-industrial society. Women must get involved in the policy decisions.

> Professional women, particularly those in the feminist movement, should pursue top-level posts in administration, including affirmative action positions, in order to influence male-dominated institutions to do what is morally right and legally required for compliance with federal and state laws. (Liss, 222).

Professional women must act, but it is more than relying on the laws, more than just legalized parity. Our efforts must be based on the idea that sports programs are based on sound judgement, theories and knowledge, as we may adopt an ideal sport model with humanistic perspectives. Maslow states that humanistic perspective is a true social revolution in that it may bring about "new ways of perceving and thinking, new images of man and of society, new conceptions of ethics and of values, new directions in which to move." (Maslow, iii). So let's move!

Women can be a force for social change. But we cannot be manipulated or hide behind laws — Title IX for example. Legally we will have equal opportunity, but we need to strive for equally belonging in the sports arena — society itself.

We can rationalize our professional lives, we can rationalize our self interests or we can use the wisdom which the post-industrial movement connotates and be innovators. We are going to need new research, new conceptualizations as we deal with sport, and put it in the perspective of Model II and III as proposed by Lawson. We cannot afford to stand by and be consumed by consumers. We need to be innovative and share in the decision-making.

Isn't it interesting that we are critical of our critics — consumers — when in fact they have formulated their opinions as a result of their experiences (anywhere from 6 to 16 years) within our programs. Therefore, who is influencing whom? Are they not reflecting our own self-evaluation? Where do we go from here? It appears we are at the crossroads. (Again? — for we have been there before.)

We can continue to define our program according to the known and use Title IX to gain parity, that is, our equal share of what is known, which would result in the continuance of the already established traditional program modeled after the men's, including the concommitant problems of recruiting, the necessity of organizations for policing purposes, etc., etc., or we can dream. Dreams — which may be fulfilled if we capture the essence of the post-industrial concept. Yes, there is a need to accept the challenge of providing quality sports programs for all according to their needs, interests, and abilities.

Planning needs to be done concerning the types of programs, physical education, sports/athletics, of defining each, and attempting to find the most effective and meaningful ways to arrive at the success of these programs. And to add to what already may be frustrating issues, the following problems must be considered: 1) the role of sports for both sexes, 2) the financing of programs (which is a most pertinent issue), 3) scholarships, 4) recruiting, 5) leadership, and I bet you can think of 6, 7, etc.

Guidelines have been established and as Lawson challenges — there is import to function as a post-industrial society with greater emphasis on humanism rather than on technology in deciding the future of sport.

I close with a quote from Toffler:

> Anticipating probable futures, however, is only part of what needs doing if we are to shift the planner's time horizon and infuse the entire society with a greater sense of tomorrow. For we must also vastly widen our conception of possible futures. To the rigorous discipline of science, we must add the

flaming imagination of art.

Today as never before we need a multiplicity of visions, dreams and prophecies — images of potential tomorrows. Before we can rationally decide which alternative pathways to choose, which cultural styles to pursue, we must first ascertain which are possible. Conjecture, speculation and the visionary view thus become as coldly practical a necessity as feet-on-the floor "realism" was in an earlier time.

(Toffler, 463).

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After Title IX

PLAY, SPORT, ATHLETICS, and WAR

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Traditionally, play, sport, and athletics have been universal forms of human movement in which people have enthusiastically participated but seldom studied for the meaning and significance of their experiences. Even though the history of many modern forms of play, sport, and athletics may be traced from their origins in the play of children in ancient societies to the funeral games and athletic festivals of the Greeks, the circus games, and gladitorial combats of the Romans, the jousts, and pageants of medieval knights and eventually to present day international spectacles; it has been increasingly more apparent in recent years that there is a need for broad cross-disciplinary study of all forms of voluntary, purposeful human movement. If basic, substantive issues, such as those posed by the changing roles of women, are to be understood and solved, there must be an in-depth consideration of the nature of play, sport, and athletics.

Substantial contributions to our understanding of those forms of movement have been made by the Dutch historian, John Huizinga; by the French sociologist, Callois; by the American philosopher, James Keating; and physical educators, Harold VanderZwaag and Katherine Ley; by the Irish Sociologist, Cyril White; and as recently as this afternoon, by Hal Lawson.

The works of these scholars has led to the evolution of a classification system or model that provides a general image of the main outline of a "Play — sport — athletics — war continuum," including ideas about the nature of the units involved and the pattern of their relationship.

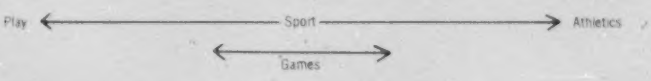
Keating[1] laid the basis for this continuum with his work in distinguishing between sport and athletics.

> "Thus, we see that historically and etymologically, sport and athletics have characterized radically different types of human activity, different

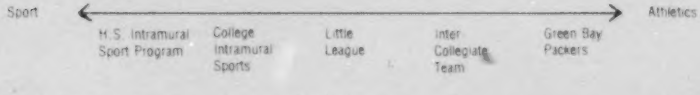
[1] Keating, James W. "Sportsmanship As A Moral Category," *Ethics*, LXXv, 1:25-35 Oct. 1964.

not in so far as the game itself or the mechanics or rules are concerned, but different with regard to the attitude, preparation, and purpose of the participants. Man has probably always desired some release or diversion from the sad and serious side of life. This, of course, is a luxury and it is only when a hostile environment is brought under close reign and economic factors provide a modicum of leisure that such desires can be gratified. In essence, sport is a kind of diversion which has for its direct and immediate end, fun, pleasure, and delight, and which is dominated by a spirit of moderation and generosity. Athletics, on the other hand, is essentially competition activity, which has for its end, victory in the contest and which is characterized by a spirit of dedication, sacrifice and intensity."

VanderZwaag[2] extended the model to show the relationships among play, sport, and athletics, and another parallel continuum of games.



This conveys the idea that games are found in play, sport, and athletics. The nature of the games changes as one moves from play to sport to athletics. VanderZwaag projects certain activities on this continuum to make the extension of sport into the athletic realm more evident.[3]



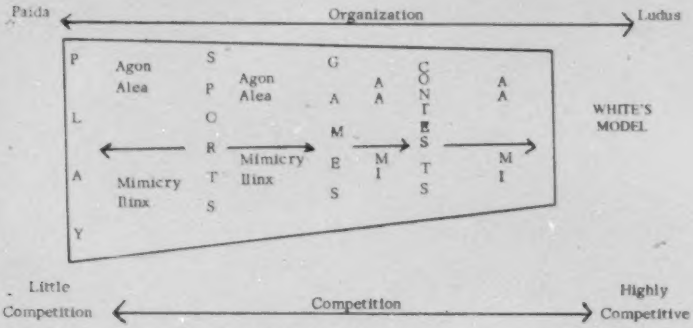
Katherine Ley [4] has suggested the following model:

THE ATHLETIC COMPETITION CONTINUUM

SPORT AS A SOCIAL EXPERIENCE				SPORT AS A GAME/CONTEST EXPERIENCE			SPORT AS AN INSTITUTION				BUSINESS SELF-AGGRANDIZEMENT ENTERTAINMENT	
	Competition (Informal)			Organized Competition								
No Interest In Competition	Vs Self or External Standard	Vs Other Individual EG Dares Challenge	Group vs Group Pick-up Challenge Short Term Matches	Class Events Intra-Mural Club Civic Groups	Sports Day Extra-Mural Field Day	League Varsity Conference	District Meet	State Meet	Region	Nat'l	Inter-Nat'l	World
1	2	3	4	5	6	7	8	9	10	11	12	13

[2]VanderZwaag, Harold J., *Toward Philosophy of Sport*. (Reading, Mass., Menlo Park, CA, London, Don Mills, Ontario, 1972, p 72.)
[3]Ibid, p 73.
[4]Ley, Katherine, "The Athletic Competition Continuum." (Unpublished paper used at a workshop at the Center for Continuing Education, Appalachian State University, Boone, N.C., 1975.)

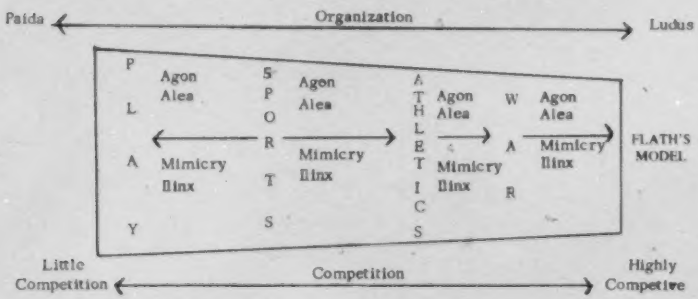
White's[5] model is an attempt to include the work of all the previously mentioned researchers.



White used the following definitions: *Play* — exercise or action by the way of amusement or recreation. *Sport* — an athletic activity requiring skill or physical powers sometimes of a competitive nature also a diversion, a recreation or a pastime. *Game* — a competitive activity involving skill, chance or endurance on the part of two or more persons who play according to a set of rules. *Contest* — a struggle for victory or superiority. White also incorporates Callois' classification system which has two components. One deals with the problem of the relationship between unorganized play and organized sport, and the other deals with a typology for categorizing games. In the former, Callois used the term "paida" to refer to activities that have little organization and have as their prime mover freedom based upon the need for relaxation and the whole field of diversion and fantasy. This need has a primary power of improvisation and gaiety and is at the foot of its most complex and rigidly organized forms. Paida is fused with the taste for gratuitous difficulty which Callois refers to as "ludus," his term for highly organized sports. The graduation from paida to ludus is Callois' way of showing a progressive formalization of activities from the spontaneous play of children to the organized sports of adults.

In regard to games, Callois identifies four types according to whether the role of competition (agon), chance (alea), pretence (mimicry), or vertigo (ilenx) predominates.

The model I would propose is presented diagramically as follows:



[5]White, Cyril, "Sports, Play, Games, and Contests: A Sociological Perspective," (Unpublished paper presented at a Seminar in The Social Research Institute, Dublin, Ireland, 1973)

In the American culture, women have been rewarded and reinforced for participation in play and sports; men have been rewarded and reinforced for participation in athletics and war.

With the recognition that play, sports, athletics, and war are universal forms of human movement and that there is greater freedom in determining our sexual identity coupled with recent federal government and state laws prohibiting discrimination as to sex, race, religion or national origin; more women will seek experiences and careers in athletics and war; and more men will seek experiences and careers in play and sport.

At the heart of the problems, resulting from the changing roles of men and women in play, sport, athletics, and war is the failure to recognize the distinctions *and* relationships among these forms of human movement and the traditional valuing certain of these forms of movement on a sexually discriminating basis.

AFFIRMATIVELY SPEAKING

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Being involved in girl's and women's athletics at this point in time is much like Alice's Adventures In Wonderland. You never know what will happen next.

If you will recall, Alice's adventures carried her "down the rabbit hole, through the pool of tears, to advice from the Caterpillar, to a Mad Tea Party and eventually through the Looking Glass." While my adventures in athletics have different names, the experiences are much the same.

Affirmatively speaking, are we ready to face the challenges and controversies in women's athletics. Up until now, we have done an effective job of avoiding controversey and under the same circumstance, avoiding challenges. Title IX has been thrust upon us for better or for worse. Our challenge will be: will we deal with Title IX or will Title IX deal with us. Affirmative Action, the words you all know so well, is our battle cry. Understanding what it is all means is something entirely different.

The road "down the rabbit hole" did not begin with Title IX — but rather the journey began a long time ago. In 1906, Susan B. Anthony died at the age of 86 after spending 53 years of her life working for Women's Right's. Her greatest life's work, the struggle for the right of women to vote, did not bear fruit until fourteen years after her death. The 19th Amendment to the Constitution was passed in 1920. I am not convinced that Susan Anthony would be very proud of us today. From 1920 until the passage of Title IX of the 1972 Education Amendments, there had not been a major piece of legislation passed to insure the rights of women.

Could Susan Anthony return to the scene of her activities, she probably would be disappointed with the fruits of victory she gave her life to win. The relatively small part played by women in practical politics, the many insidious state laws that still stand on the books, the small proportion of women in centers of higher learning — such survivals would probably affront her as much as they ever did.

The road continues through the "pool of tears."

The attitudes that people have about women in sport influences the total athletic opportunities that are available to women — the funding of programs, the adequacy of facilities and equipment and the employment conditions of their teachers and coaches etc., just to name a few.

In *Coaching Girls and Women - Psychological Perspectives*, Patsy Neal discusses the plight of the female athlete when she states: "Sport is an interesting phenomenon in our society — an actual reflection of the entire society — in which the male is cheered on — while the motives of the female are suspect. Girls have been taught since childhood that feminine girls and women do not play hard or strive too strenuously. When the female athlete fails, she is not living up to her expectations as an individual and when she succeeds, she is not conforming to the role that society has designed for her."

She concludes: "The American woman is faced with a paradox — she lives in a country which perpetuates the achievement of success, while at the same time, she is taught to be a loser." For the female athlete, this fear of achievement takes from the joy of success. Fortunately the contemporary female athlete has emerged as one who realizes that participation in sport is a movement experience not limited to males, and to experience the joy of victory and agony of defeat is not a condition of sex.

There is a growing recognition that women's athletics, especially women's intercollegiate athletics is likely to change dramatically in the next decade. A report to The American Council on Education on Intercollegiate Athletics found that:

> "The most important and far-reaching development on the college sports scene has been the movement to achieve equal treatment for women in the conduct of intercollegiate athletics."

The Caterpillar says, "It has been a long time in coming. Make the most of it."

Certainly, any discussion of Tittle IX can easily be compared to a "Mad Tea Party." Everyone is talking a lot — no one is sure what they are saying. At USC, we just recently sponsored a conference entitled "Women, Sport and the Law." For the first time, many of my questions were answered. As an athletic director, my greatest concern is to insure the continued success of the women's program and to guard equality of opportunity.

What steps must be taken after Title IX? I would like to deal with three areas that require affirmative action under the Title IX provisions and are of particular concern to me. Those areas are: funding, scholarships and the hiring of full-time coaches.

Each institution will react to the problem of funding in a different way simply because of the variables involved. However, whatever the variables, under affirmative action, an institution must provide comparable dollars for the women's athletic program. No longer can the women's program be budgeted at $4,000 if the men's budget is at $400,000. In studying the history of women's athletics at USC, I came across a report prepared by Dr. Ailene Lockhart in 1967, in which she was responding to a communication that indicated that the women's program would not be funded for the following year. It is not as if the budget was that large — in fact it was just $2,000. In 1976-77, the budget for women's athletics will be $242,000. And, I can't even balance my checkbook.

I honestly have not concerned myself with the amount of the men's budget, but rather have concentrated my efforts on the women's program — our needs, direction and ultimate goals. It has worked very well.

In the area of scholarship allocation, affirmative application simply means reasonable opportunities in terms of the number of participants in the program. Each institution needs to determine that magic number and work toward that goal. In some instances, particularly in volleyball, gymnastics and tennis it is conceivable that there will be more women on athletic scholarships than men. Under Title IX, each institution may determine the number for each sport and in keeping within the framework of the governing organizations.

The hiring of coaches and establishing comparable salaries is of major importance. For years, in women's athletics, we have always assumed that the physical education teacher would do double duty — teach and coach. As the programs grow, it becomes increasingly obvious that many physical educators do not wish to coach but are thrust into a situation because of a lack of funds and or lack of personnel. Conversely, many

physical educators do not wish to teach but would like to become full-time coaches. Until now, that opportunity did not exist for the person who desired full-time employment. This has long been a neglected area — however, those full-time coaching opportunities are now beginning to surface. It has been a long time in coming — we are ready.

The opportunities for women in sport are greater now than ever before. With the advent of the feminist movement, Title IX and a greater awareness of sport as neither male nor female but as a human happening, sport has progressed.

The process of building programs can be a pleasant but at times, a discouraging adventure. But, we are now ready to go through and beyond the looking glass — the future looks very bright. Title IX has opened a brave new world in which opportunities for women are abundant. I believe that we are ready for the challenges and can cope with the controversies.

"Affirmative action — here we come."

I take it all back. I do believe that Susan Anthony would be pleased. And, going back to Alice, I hope that we won't wake up someday and find it all to be a "dream."

AFTER TITLE IX — WHAT?: OR WILL THE "SAME OLD PROBLEM" NOW MOVE TO THE DISTAFF SIDE?

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After Title IX — What??? This sounds like a crystal-ball question, and indeed it is! As with all things in the future, the shape which collegiate athletic programs will take in the year 2000 — even in the year 1985 — is as yet undetermined. It is precisely because the future is open that there exists an opportunity to influence the direction these programs will take. The decisions which are made *right now*, of course, will have an effect upon the programs of the future, and *now* is the time to exercise extreme caution regarding the choices which we make. In the pages which follow, seven observations are offered which, it seems to me, have relevance for the future of intercollegiate athletics in the United States. These are not the only observations which might be made. They are, I believe, among the more important ones, however.

The enactment of that federal legislation which is known as Title IX raises many conceptual as well as practical problems. With regard to the concept of equality of opportunity for members of the female sex which *appears* to underlie Title IX, one can certainly not find fault. After all, in a liberal and democratic society, who can condone the kinds of attitudes which have subjected women throughout history to so much *de facto* as well as *de jure* discrimination? (Among my favorite historical figures have been men like Erasmus Darwin and women like Mary Wollstonecraft who spoke out in their own times against the restrictions which society placed upon members of the female sex.)

Nevertheless, I admit to considerable concern that in all this recent discussion concerning "equal rights" there seems to be a very clear and present danger that women may ultimately settle for accepting *unaltered* those social and political institutions which are the result of a history of male-dominated thought and action *when*, in the long run, *the more productive course of action might well be* the development of an entirely fresh approach to social problems and political institutions.

I admit to an extremely ambivalent attitude regarding the so-called movement for equality of opportunity for women in athletics — especially athletics connected with institutions of higher learning. I recognize that admitting to such ambivalence may make me a pariah in the eyes of some of my colleagues, but I think there is reason for much caution and concern.

It should be noted that the term "affirmative" has several dictionary definitions; one implies the assertion of something to be true or real; another implies to assent or to *yield*. It makes a great deal of difference, I think, which of the above-mentioned definitions of "affirmative" we subscribe to. I fear it is all too often the second one. Just as a fresh approach may be what is most needed in dealing with our social problems, so a fresh approach to college "athletics" — which is our subject this evening — may well be what is most needed. The enormity of the "athletics question" makes selectivity difficult and dangerous. Nevertheless, I have selected seven items which seem especially in need of our immediate attention.

I. Growing criticisms of an excessive emphasis on winning in our society

Although Juvenal's declaration that first century Roman crowds longed for just two things — *Bread* and *Circuses* — does not seem out of place today, it seems evident that a growing number of Americans have begun to question the over-emphasis which has been increasingly placed upon athletics in contemporary culture. On May 11, 1976, prime-time television carried an hour-long program entitled "Winning is Everything?" which depicted some of the stresses placed upon *sub*-teenaged boys — and now girls — in organized athletics. A recent motion picture, *Roller Ball*, portrays the mechanization, brutality, and dehumanization to which so-called "sport" may descend in our century. Goodhart and Chataway[1] have referred to the popular passion for representative sport as a kind of "war without weapons." At a recent international field hockey tournament I became aware that the opposing forwards, in hopes of being awarded a penalty corner, were repeatedly attempting to drive the ball into my legs rather than shoot for goal. Five years ago Bruce Olgive and Thomas Tutko cautioned that if one wanted to build sportsmanship, try something *other than* athletic competition.[2] At graduation exercises at the University of California in June, 1975, Dr. Tutko declared that in the current preoccupation with the "athletics are everything" scramble, physical education was in imminent danger of losing something valuable and unique which it once had to offer. The "ultimate athlete" projected by George Leonard[3] bears little resemblance to the athletic "hero" described in the daily sports page or depicted by television sportscasters. In the December 1974 *Sports Illustrated*, William Johnson speculated that by the year 2000 we would see such things as: women on major league teams; intricate electronic officiating devices; only a heavy-weight boxing division (the other divisions having become too tame); and the open sale of drugs at sports concessions. Johnson went on to observe that many young people in the 1960's began to reject an excessive competitive attitude in sport just as they rejected the way in which they were "... ranked, graded and sorted in every effort they undertook." His observations on "Technosport" remind us in a frightening fashion of Orwell's *1984*. The polar opposite of "Technosport," the author suggested, will be "Ecosport," where free, *un*structured natural play (even badly played play) is the norm.[4] These extremes ("Technosport" and "Ecosport"), I believe, do help emphasize a point. But there are, I contend, other alternatives — alternatives which we should seek to implement right now!

II. Are women going to adopt this very model which is being increasingly criticized?

I must admit to not a little disappointment that just at a time when criticism is mounting concerning competitive athletics in America, women either: a) often seem to be forced to accept, or b) have actually opted for those precise male-engineered athletic models which are being criticized. Certainly, criticisms of intercollegiate athletics are not new. The Hanford Report of 1974[5] echoes many of the objections and concerns raised in the Carnegie

report of 1929.[6] Early leaders in physical education were well-aware of the ideological conflict between intercollegiate athletics and physical education. At the 1910 meeting of the Athletic Research Society, Clark Hetherington stated: "... professional spectacles should be distinguished from educational athletics."[7] In 1914 William Foster, President of Reed College, declared: "... first of all the question must be decisively settled, what aims are to dominate — those of business or those of education."[8] It seems to me (and, quite obviously, to other speakers at this 1976 NAPECW Confence) that "big-time" collegiate athletics in the 1970's are unquestionably designed more for *business/entertainment* than they are for education. In fact, the distinction between many professional and intercollegiate sports is purely fictional — except that college athletes are less well paid. (As one example, the varsity baseball team at the University of California recently played the Oakland "A's" professional major league team).

It is, I believe, once again time to declare that regardless of what form athletics might take in the general society, athletic sports in institutions which are organized for (and supposedly dedicated to) educational goals, have a special role to perform and that this role has been habitually subverted by imposing the model of the business community upon collegiate — even scholastic — sport.

III. Will higher education now lose an important educational athletic model?

Early male leaders in physical education were not the only ones to raise questions regarding the appropriateness of big-time intercollegiate athletics as a proper undertaking of an educational institution. As early as 1903 Lucille Hill expressed the apprehension of many women physical educators when she voiced a concern that "... we must avoid the evils which are so apparent to thoughtful people in the conduct of athletics for men."[9] The efforts which were made to prevent the occurrence of such difficulties as commercialism and exploitation of players in programs of collegiate sports for women in the first several decades of this century have been carefully outlined by several authors.[10] Certainly, there is much justification for the claim that the official position of the N.S.G.W.S. imposed overly severe limitations upon collegiate athletics for women. It is also probably true that the typical women's programs — low-key, very moderately financed, restricted in scope and intensity — had little influence upon the prominent men's programs; but they did, at the very least, reflect an emphasis which was *educational*! I *do* think that it is possible to suggest that the presence of the "educationally-oriented" women's program did at least serve as an example that such programs could exist, and that, moreover, *this* was the proper form for an athletic program at an educational institution to foster. The obvious disadvantage of this arrangement, of course, was that the distinction between the "business/entertainment model" and the "educational model" was based upon the sex of the participant. (Moreover, I have often wondered how many young *men* who were not fortunate enough to have been *recruited* would have liked to have had even those opportunities which were available to the women in their intercollegiate sports programs.)

IV. The proclivity for single, uniform models joins the failure to distinguish purposes.

It is sometimes suggested that many of our difficulties arise from the failure to recognize and take into account the etymological derivation of the words *athletics* (from the Greek *athleo*, meaning to "contend for a prize") and *sport* (from the Latin *disportare*, meaning "to be free from a burden.") Keating[11] makes the important observation that because of overly general and careless usage, *sport* has become a word which is largely meaningless today and suggests, instead, the use of the generic terms *athletics* and *play*. While I believe that it is enormously important to take into account and understand these distinctions, I will leave this topic for another discussion. (It is worth noting, however, that we say "professional SPORT" and "intercollegiate ATHLETICS"). What seems important here is the point which Keating makes so well: we must be careful *not* to confuse one of these concepts with the other. There is, I believe, too much inclination in our society to hold up for emulation only *one model* — the model of prominent, spectacular professional sports. By what incredible illogic, one must ultimately ask, do we assume that schoolboy (and now schoolgirl) sport should follow the same pattern as is followed by adult, specially trained men? I have become increasingly convinced that the American penchant for the "exclu-

siveness of the one valuable model" has caused monumental problems for college athletics. The trap of the "one valuable model" inclines us to the belief that, when all is said and done, there is only one model of athletic-sports participation which really counts for anything. Oh, we do lip-service to the value of other forms — to intramurals or club sports — but in the final analysis it is all too frequently the intercollegiate athletic program which captures the very large percentage of the time, the money, and the effort. The "exclusiveness of the one valuable model" attitude has done more, perhaps, to hinder the development of educational sport than has anything else. In this, I fear, physical education must assume its share of blame.

V. Colleges and universities have abdicated their central mission — liberal education.

In recent years there has been an increasing demand for the campus to reach out into the community and for the community to move onto campus. Also, for several decades there has been a tendency to replace liberal with specialized education. Surely society has the right to expect that institutions of higher learning will contribute to the total sum of human knowledge in ways which will help society improve. I often wonder, however, if colleges and universities have not actually done both their students and society a disservice by becoming too closely identified with each other. Throughout history a need has been felt for places where thoughtful individuals might withdraw from the turmoil, the frantic pace and the urgencies of daily life and find the opportunity to reflect upon the important questions which confront the age. When this opportunity was eliminated, as it largely has been in the past few decades — when the college becomes *identical* with the society of which it is a part — we lose something extremely valuable. I rather think that in the case of "big-time" intercollegiate athletics we have a very visible and dramatic example of too close an identification of college with society. If we are really honest we have to admit, I think, that there is substantial truth in the recent *Sports Illustrated* account describing the Mount St. Mary's College program of sports for all:

> "When putting on those familiar gaudy spectacles begins to take up most of the money and time of an intercollegiate athletic department, then that program has little educational justification. That is not the business of a college."

The article goes on to observe that the athletic establishment — the coaches, administrators, publicity men (and, I might add, all the manufacturers and entrepeneurs who make millions from such programs) — as well as the N.C.A.A., which is their union, "... will fight tooth and nail against giving sports back to the students."[12] (The recent continuing disagreements between the N.C.A.A. and the A.I.A.W. would seem to support this view.)

VI. Will athletics destroy physical education?

In a cogent discussion of the multitude of problems which the enactment of Title IX has created for both departments of physical education and departments of intercollegiate athletics, Donna Mae Miller[13] has made the observation that the male athletic establishment has traditionally been so firmly entrenched that when funds are limited a confrontation situation may arise in which the physical education department is in the weaker position. I admit to some deep concerns regarding possible adverse effects of intercollegiate athletics upon physical education programs in the next few years. There are ample instances where departments of physical education (bachelor's degree programs as well as service programs) exist on impoverished funding while athletic departments flourish. It is astonishing (and *has been* for a century) that well-educated — often intensely scholarly — individuals who administer educational institutions so rarely see anything unusual in placing a curricular department in the inferior position.

VII. Will interest in athletics cause physical education to neglect its other programs?

I would suggest that departments of physical education in colleges and universities have sometimes voluntarily devoted too much of their efforts and their energies to athletics — and sometimes to activity programs — to the detriment of the development of their academic programs. I am increasingly convinced that physical education needs to devote

more attention to scholarly endeavors of its own and to establish sound cross-disciplinary investigations with such departments as physiology, psychology, anthropology, history, and sociology. For decades many of the most important questions which *should have been* subjects of investigation for physical education have been taken over by investigators in other disciplines. While I recognize the enormous value of the performance/phenomenological dimensions of disciplines like music, art, drama, and certainly our own, this does not absolve us of responsibility for careful, extensive, in-depth scholarly activity. The danger *does* exist, I believe, that in our present preoccupation with intercollegiate athletics we may default in our other responsibilities.

Some concluding observations:

In March 1975 I suggested several possible future directions for women's intercollegiate athletics.[14] Although my views are fundamentally the same now as they were then, some modifications seem necessary. I still contend, however, that we all (college presidents, faculty, the general public — no less than physical educators) must first ask and answer honestly for whom and for what purposes is the scholastic athletic program to be conducted — The general public? The alumni? The student body? The prestige of the institution? To generate gifts and endowments? To supply professional teams, and to provide athletes to represent the United States for international political reasons? The participating athletes? Duly matriculated students who would like athletic/sports opportunities? How honestly we answer this question will greatly determine the type of programs which we believe should be fostered in the next 25 years.

I would now like to suggest and comment upon three possible future directions for intercollegiate athletics:

1) Special colleges designed to emphasize athletic training could be established in various regions of the country to prepare outstanding athletes, coaches, trainers, etc., for national and international competitions, as well as for the professional business/entertainment sports ranks of the future. The curriculum of such colleges would emphasize athletics, but other studies would be included. This is a model which exists in several other countries. Considering the use which institutions of higher learning in this country have made and still make of athletic teams for purposes of publicity, student body unity, alumnae support, etc., this model seems unlikely to be accepted in the United States.

2) Although it seems less likely now than it did in 1975 (and, I must admit, it did not seem too likely then), women still may be able to persuade institutions of higher learning to face up to their primary mission — *education* — and effect a modification in *all* athletic programs. A close look at the 100 year history of intercollegiate athletics in the United States (1875-present) suggests that there is little likelihood of accomplishing *this*. Although I see relatively little hope for a radical change, *if* football and basketball were to be organized into their own separate department, however, there is an outside chance that the other sports might be organized on a more educational basis.

3) Women's programs can develop along the same lines as have intercollegiate athletic programs for men. I think there is more likelihood of this happening *now* than there was in 1975. If this is the case, I would strongly suggest that intercollegiate athletics (for men *and* women) declared themselves to be in the entertainment business and dissociate from Departments of Physical Education. They should then become an ancillary organization of the college and derive *all* their financial support from donations, gate receipts, television rights and conference sharing, and possibly from professional sports franchises and the federal government. At the very least, such programs should be organized under Schools of Business Administration, *not* under Departments of Physical Education. These ancillary departments would continue to offer a program of selected sports for outstanding male and female *athlete*-students. Participants would be recruited for their athletic prowess and their potential for bringing publicity and money to the institution. They would be paid a respectable salary (the euphemism "grants-in-aid" would be done away with, as would the unworkable designation of amateur-professional.) *Athlete*-students would be allowed to participate as long as they were making progress toward a degree. Such professional sports franchises as may benefit substantially from the collegiate programs would be expected to contribute to their support, probably through some central agency. The whole enterprise could be run openly for what it is —

a business. Those *student fees* which are now directed to Departments of Intercollegiate Athletics (in some colleges these fees from the general student body amount to well over half a million dollars) would be directed to a wide range of extramural competitive *sports clubs* (which might well be conducted under the auspices of the Department of Physical Education), open to regularly matriculated-recruited male and female students.

After Title IX — What??? Like so many other things in life, the answer is up to us. If we really want to effect changes in school-related athletics we must begin NOW! There may may have never been a more propitious moment. If we desire a change in the traditional attitudes we must be willing to brave *enormous* opposition and willing to endure scathing criticisms. The most difficult thing to change will be the entrenched traditional attitudes. This is, quite obviously, an enormous task — and we have no assurance we will succeed. In fact, the odds *against* success may be viewed as monumental. But, to borrow from the words of one of the more famous figures in modern day sport, "... the important thing in life is not the triumph but the struggle, the essential thing is not to have conquered but to have fought well."[15] Does physical education have a professional responsibility to attempt to educate the American public regarding educational sport/athletics? If so, "how well are YOU willing to fight?"

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1. Goodhart, Philip and Chataway, Christopher. *War Without Weapons*. London: W.H. Allen, 1968.
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3. Leonard, George. *The Ultimate Athlete*. New York: The Viking Press, 1974.
4. Johnson, William O. "From Here to 2000." *Sports Illustrated*. 41:26 (December 23, 1974). pp. 73-83.
5. Hanford, George H. *A Report to the American Council on Education on an Inquiry Into the Need for and Feasibility of a National Study of Intercollegiate Athletics*. March 22, 1974.
6. Savage, Howard J. *American Collegiate Athletics*. New York: The Carnegie Foundation, 1929.
7. Hetherington, Clark. "A Statement of Principles for a National Athletic Platform." *American Physical Education Review*. 16:9 (December 1911).
8. Foster, William. "Dr. Foster Discusses Ideals of Athletics." *Reed College Quest*. November 20, 1914. (Dr. Foster expressed similar views shortly thereafter in the *Atlantic Monthly*).
9. Hill, Lucille E. *Athletics and Outdoor Sports for Women*. New York: Macmillan, 1903.
10. Among the more recent works the following are quite useful: Gerber, Ellen W. "The Controlled Development of Collegiate Sport for Women: 1923-1936." *Journal of Sport History*. 2:1 (Spring 1975). pp. 1-28; Gerber, Ellen W. et al. *The American Woman in Sport*. Reading, Mass.: Addison-Wesley Publishing Co., 1974.
11. Keating, James. ("Sport Or Athletics: A Conceptual Analysis"). *In*. Murray, J. Alex (Ed.). *Sports or Athletics: A North American Dilemma*. Windsor, Ontario: University of Windsor, Canadian-American Seminar, 1974. pp. 1-9.

NAPECW - NCPEAM IN TRANSFORMATION

The Other Half

A TRANSFORMATION EQUAL TO THE CHALLENGE

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In 1972 at the Balsams President Phebe Scott and Past President Catherine Allen urged the NAPECW Board of Directors to consider a "mandate" to develop goals for the Association and to waste no time in getting the project underway.[1] A committe was formed to design a plan of action and it was determined that the celebration of NAPECW's Golden Anniversary in 1974 would be the time, not only to review the positive accomplishments of the Association's first half-century, but also to clarify future purposes and directions. The District Associations debated issues, raised questions, and offered suggestions through activities appropriate within each District during their 1972 and 1973 fall conferences. Members of NAPECW functioned as a "committee of the whole" between August, 1972 and August, 1974 in the effort to develop Association goals for the future. An historical review of the purposes of the Association was initiated in order that decision-making might be based on the cumulative experience of the past, understanding of present realities, and thoughtful perspectives of future alternatives. This task was undertaken by Phyllis Hill, NAPECW Historian, who presented a preliminary report at Boyne Highlands, and who wrote the history of the purposes of NAPECW recently published as the document enfitled, *"The Way We Were:" A History of the Purposes of* NAPECW, 1924-1974.[2]

Hill introduces the history of NAPECW purposes with this prologue:[3]

> That the National Association for Physical Education of College

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[1] *Biennial Record*, 1971-73, p. 11

[2] Phyllis Hill, *"The Way We Were:" A History of the Purposes of NAPECW, 1924-74*. NAPECW, 1976.

[3] *Ibid.*, p.4

Women would authorize an in-depth study of the status quo of the Association in August, 1972 at Dixville Notch, New Hampshire was inevitable.* For the twelve preceding years, the association had been faced with the need to resolve such issues as the composition of the Board of Directors, the determination of the kind and type of committee structure needed, the establishment of professional relationships with allied organizations and an evaluation of apparent change of the profession.

The work of the Association in the 60's had resulted in its incorporation in 1969 and had laid the groundwork for a gradual change in purpose and in process. Committee reports yielded such recommendations as:

1. increased interaction between NAPECW and NCPEAM at both the National and district levels.
2. a full-time executive officer.
3. more frequent and informative publications.
4. greater involvement of the Membership in decision-making for the organization.
5. the development of a position paper on physical education in higher education.

With those recommendations and more questions than answers, the NAPECW Board of Directors had convened in New Hampshire to determine the future directions of the Association. The minutes of the meetings are replete with a stronger than ever realization of the need and desire to move forward. Equally strong, however, were the voices that called for the protection of what had always been the essence of the Association.

At that point, the Board of Directors made a choice to delay the charge to alter the Association and called for an in-depth study of the past purposes of the Association. What of what NAPECW had become was an historically necessary condition and what of it was habit born of history?** Toward these ends, a historical review of the purposes of NAPECW has been written.

In my attempt to analyze NAPECW in transformation, I have relied heavily on this record and I wish to acknowledge the scholarship of Phyllis Hill, although the selections of historical items and the applications of historical realities to present conditions will be my own. From my study of this document, I have concluded that what is consistent in the historical evolution of the purposes of NAPECW can be summarized in four points of emphasis.[4]

(1) The Association has consistently maintained its force on promoting physical education as a curricular experience, as a discipline, as a profession.

(2) The Association has consistently maintained its focus on college and university physical education, demonstrating concern for general college programs, undergraduate and graduate professional programs, and for intramural, club, extramural, and athletic programs.

(3) The Association has consistently directed particular attention to the special needs and unique concerns of women in physical education and sport.

(4) The Association has consistently viewed itself as a policy-making body and a "working" organization with a primary purpose of providing opportunities for its members to serve the physical education profession.

On the other hand, the history of Association purposes clearly demonstrates that we have disagreed throughout our history on the resolution of three key questions relating to our

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[4] *Ibid.*, p. 2

* "The Aquarius Report," *NAPECW Biennial Record*, 1969-1971, pp. 102-105.

** Eleanor Metheny, "Folklore, Fiction and Fantasy," Banquet Address, NAPECW Workshop, Excelsior Springs, Missouri, March 29, 1958.

purpose.[5]

(1) To what extent should NAPECW concern itself with national professional issues, drawing strength from regional support and implementation of common policies? Does the national association exist to provide national leadership and a unified professional voice or to serve the district associations and coordinate their activities for more effective autonomous functioning?

From the earliest beginnings, the needs for both national strength and regional autonomy were recognized. The National Association of Directors of Physical Education for Women in Colleges and Universities was designed in 1924 to serve several functions including to "provide a sense of national strength, prestige and unity to its membership," "function as a clearinghouse for its member societies," and "encourage sectional autonomy."[6] In 1936 President Rosalind Cassidy called a special meeting and appointed five long-term planning committees stating, "We must clarify again the function of the national association... I conceive of the national association existing through and because of the section groups..."[7]

Special committees, once or twice a decade have examined the structure of the Association, the Board of Directors, or of Association standing committees, with District representation on the Board always a pivotal question. In 1963 President Leona Holbrook recommended that the Board address itself to two questions: What can NAPECW do for the District Associations? What can the District Associations do for NAPECW?[8] President Marion Broer's Committee on Structure and Future Directions, during the 1967-69 biennium, achieved consensus on a series of statements including the following:

> One of the greatest assets of NAPECW lies in the strength and autonomy of the district organizations and dependency through districts to the national should be maintained. We must examine the role of NAPECW to determine how it can achieve what districts cannot accomplish.[9]

(2) How much priority among its purposes should NAPECW give to the problems of women or to those of physical education? Does the Association exist to serve women or to provide a channel for women to serve the physical education profession?

When NAPECW was organized as an association of directors, the question of membership was a major problem. The Eastern group was an association of directors established in 1915; the Middle West Society of College Directors of Physical Education for Women adopted a constitution in 1917 which permitted membership by current members of APEA, who "had not less than three years teaching experience in Physical Education and 'were actively engaged in college work.'"[10] In the historian's words, the essential question was, "What was needed?" "Some believed that problems of organizing and administering college programs for women students was the larger purpose, while others laid greater stress on the need to advance the field of physical education."[11]

In the 1930's the Association gave much attention to clarifying its position against national tournaments, varsity competition, and the participation in the Olympic Games of women representing the United States.[12] In the mid-fifties, the emphasis seemed to shift to broader issues again. During the biennium of President Laura Huelster much attention was given to alliances with other organizations; presidential committees were appointed on Professional Leadership, Instructional Program in Physical Education for College Women, and Intramural and Extramural Sports and Dance.[13] The problems of the woman athlete appeared to dominate the scene in the late fifties when the problem of finding a "home" for

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[5] *Ibid.*, p. 2
[6] *Ibid.*, p. 10
[7] *Ibid.*, p. 19
[8] *Ibid.*, p. 34
[9] *Ibid.*, p. 38
[10] *Ibid.*, p. 6
[11] *Ibid.*, p. 7
[12] *Ibid.*, pp. 10-22
[13] *Ibid.*, p. 28

the women's national collegiate golf tourney led to the establishment of a Tripartite Committee with DGWS and ARFCW during President Ruth Wilson's biennium,[14] and to the National Joint Committee on Extramural Sports for College Women when Lucille Verhulst was President.[15] (These committees were the forerunners of the AIAW.) In the 1965-67 Biennium, President Celeste Ulrich's Wishing Well Committee reflected Association concern to address the broader issues of the physical education profession once more. The Wishing Well Committee "identified a need for more workshops and clinics in the areas of philosophy, sociology, dance and movement notation; a need for guidance in research, graduate education and in professional upgrading."[16]

(3) To what extent should NAPECW focus on the solution of the problems of physical education in higher education in contrast to an orientation to broader social issues? Does the Association exist to promote college and university physical education or to provide a channel for its members to bring their professional expertise to bear on important social issues?

Prsident Gertrude Moulton opened the business meeting of the Seventh National Conference in 1932 challenging the participants with:

> The need of our conference — or of any conference — is to consult maps, to determine, or to clarify in our minds, the objectives of the day... Certainly our objectives are not the preservation of the status quo.[17]

In closing, she urged that "we . . . become life-minded not subject-centered."

Another example of turning the focus beyond physical education is evident in the 1941 conference with Dorothy Ainsworth as president when a resolution dealing with the National Emergency was adopted. It was resolved that

> "we encourage as many women as possible to prepare themselves in First Aid...Home Nursing, and in Life Saving and Water Safety,...that the addition of new extracurricular activities which have no relation to National Defense would be inopportune at this time and should be discouraged...that we stimulate the preparation of as many women as possible for community leadership."[18]

Similarly, the 1947-48 biennium with Helen Hazelton as president gave emphasis to Association activities directed toward international understanding, including leadership in planning the first International Congress on Physical Education for Girls and Women in Copenhagen.[19]

NAPECW has always been in transformation. Although there have been consistent emphases on promoting physical education, on college and university programs, on the unique concerns of women, and upon a policy-making, working organization, these emphases have manifested themselves in diverse ways; and disagreement has persisted concerning priorities of national unity vs. regional autonomy, problems of women vs. those of the total physical education profession, and problems of college physical education in contrast to broader social concerns. Today's problems and decisions must be faced in terms of our interpretation of the present phase of the transformation process and our best judgments concerning the future we are trying to create through professional association.

(1) Do we need a unified national professional voice for physical education in higher education? I am convinced that we do. I believe that the economic pressures, the political realities, the increasing diversity of professional specializations and of individual and institutional lifestyles, and the significantly changed communication channels of the 70's, as well as our expanding professional goals, have made a unified national professional voice a condition of the survival of physical education in higher education.

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[14] *Ibid.*, p. 29
[15] *Ibid.*, p. 31
[16] *Ibid.*, p. 35
[17] *Ibid.*, p. 14
[18] *Ibid.*, p. 21
[19] *Ibid.*, p. 25

It seems evident that the key question of national leadership versus simple coordination of regional activities which has threaded our history today must be asked in these terms. How much priority shall we give to meeting the need for a unified national professional voice? If it is vitally needed, who will provide this voice for physical education in higher education? Can it be NAPECW alone in some stage of transformation? Will it be NAPECW and NCPEAM in alliance? Will some other association or group move into the partial vacuum which we, by default, allow to exist? And how will this unified voice speak effectively? Through which formal association structures? Through what kinds of professional activities — conferences, resolutions, position statements, publications, affirmative actions, political initiatives, legislative confrontations, new models for physical education and sport?

(2) How much priority must this Association give to the unique problems of women in the mid-seventies of the 1980's? It is apparent that college and university women do not yet have equality of opportunity in athletics. Clearly, women need to be more assertive in achieving equal status with regard to salary, academic rank, and access to administrative positions. Women in physical education need additional support, both material and psychological, to be equal participants in curriculum development, instructional innovation, research professional service and leadership. Decision-making in departments and colleges of physical education, in institutions of higher education, and in professional associations needs the full participation of able women and a blend of the linear and multivariate thinking which Ursula Delworth in her address at Boyne Highlands, attributed predominantly to men and women, respectively.[20]

How should we assess these needs in transformation in contrast to the overall problems of physical education? Can the unique problems of women be kept in focus and solutions pursued vigorously within the broader context of physical education's needs in transformation? The key problems of physical education today, in my judgment, are the strenthening of our programs through the elimination of sexism, creating a new harmony of physical education and athletics, and bringing physical education into its central role in education. We need to eliminate from our programs the cultural biases which restrict the full participation of persons of both sexes in activities selected from a broad spectrum of potentially meaningful experiences. We need to create new models for physical education and sport which will make it possible for physical education instruction and organized sport not only to co-exist on the campus, but also to contribute effectively to the same educational goals. We need to transform physical education into a curriculum which becomes central in education through its focus on the development of whole persons each of whom George Leonard could define as "the ultimate athlete."[21]

(3) How much of our energy will we devote to promoting college and university physical education? How much of our expertise as educators will we contribute to resolving the broader issues in higher education? What is our role in sharpening higher education's focus on the nurturance of individuality,on institutional alternatives supporting open education, on affirmative actions to eliminate discrimanatory practices based on any type of bias, on structural reforms designed for transformation toward true participatory democracy?

To what extent should our national professional association be expected to promote physical education on the individual college or university campus? Do we expect direct support of our efforts to win time, credit, academic respect, or approval of new courses for our programs? Can we demand services to assist in our attempts to gain key committee appointments and prestige positions for our departments? Do we anticipate specific help in our battles to gain tenure and advancement for our faculty members? Can we participate effectively in the resolution of such issues as faculty governance, student participation in decision-making, evaluation of teaching effectiveness, equitable policies and procedures for selection, retention, and promotion of faculty members, fair and

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[20] Ursula Delworth, "Application of Humanistic Preciples to Organizations," (unpublished paper presented to the NAPECW Biennial Workshop, Boyne Highlands, Michigan, August 13, 1974.)

[21] George Leonard, *The Ultimate Athlete*. New York: Viking Press, 1975.

effective procedures for conducting searches for administrators, program evaluation as the logical basis for major curricular decisions, mergers of departments, the role of sport in higher education?

The key questions which face us now are the continuing questions of NAPECW's first half-century, rephrased by today's urgent needs and the hope of a transformation which will be equal to the challenges:

(1) Will these Associations become a unified national professional voice for physical education in higher education? Or will this role remain unfilled until another group achieves the strength required for such leadership?

(2) Will physical education be our top priority during this particular phase of transformation? Or does the support system for women, in the traditional pattern within which we have been reared, transcend our commitment to the physical education profession?

(3) Can we afford to view our legitimate concerns as physical educators, or as women, in isolation — geographic isolation within the larger world, or disciplinary isolation within the broader academic community — or shall our transformed Associations seek a broader common ground and thus earn a more central place in higher education?

TRANSFORMATION FROM A PHILOSOPHICAL PERSPECTIVE

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INTRODUCTORY COMMENTS

The comments I will share with you were prepared in Tennessee. During the initial days of the workshop I was apprehensive in that I thought my remarks could be interpreted as an attempt to support my bias of merging our two organizations and I therefore changed the material. However, yesterday I arrived at what I hope is a more logical position of realizing that the program chairperson was not aware of my bias when she invited me to participate in the program. Since I have not consciously or purposefully selected material which would support my bias or neglected material which would be in opposition to my personal opinion regarding the future of our organizational plans, I am presenting a second version of the original material.

My task is to review organizational change or transformation from a philosophical and/or speculative perspective. This has been a challenging and risk taking assignment. In most situations, a philosophical approach is expected to be broad in scope without abandoning standards of rigorous thinking and clarity. There are at least two dangers inherent in a speculative or philosophical analysis — one, empty formalism and two, wooliness. I have attempted to guard against these dangers and to avoid the extremes of trivial exactitude and of pompous profundity. My approach was to review material pertinent to social change, social organization and reorganization, organizational theory regarding change, and the general topic of organizational health. Many other broad categories might have appro-

priately been examined but these selected areas appeared to provide a framework within which a few generalizations might be made which could enable us to appreciate the *idea* of organizational change as opposed to focusing on specific changes within our organization.

Most of us belong to many organizations and have served on committees in professional, social, religious, political, and community organizations in which constitutions have been changed, the name of the organization has been changed, by-laws have been written and changed, and purposes reviewed and subsequently changed. School districts are reorganizing; religious denominations are being consolidated, generic terms are being substituted for specific identities, in most states the institutions of higher learning have had major name changes. Many of our departments, schools, divisions, and colleges have been reorganized. If there were a professional physical education Rip Van Winkle returning to our field from a well deserved and extended rest, she would need an interpreter to assist with the deciphering of our alphabetical musical chairs. Such a re-entry would indeed be confusing. For those of us over thirty, we have experienced organizational change if not transformation. As Bob Dylan sings, "The times they are a-changin' " he is communicating an eternal truth. I believe he should add to his message that it is the same human nature and the same physical nature that are being recycled during the change.

Western civilization is committed to a dynamic view of life that implies continuous change — a belief in the possibility of progress which is as ancient as Greek mythology. Most people now take it for granted that modern civilization is engaged in a continuous process of change to a new state that will certainly be different from anything in the past, even though it may not be better.

Historians and philosophers among us have often asked "Is Change Progress?" Obviously all change is not progress. There have been critics of "change equaling progress" very early in our American history. Thoreau, who retreated to Walden and who cursed the first railroad, was a critic of the idea that change meant progress. And by the end of the 19th century, there was a much larger chorus than just Thoreau marching to a different drummer. The chorus has grown even greater in the 20th century. When we consider that this century has seen two major world wars, a gigantic economic depression, the Cold War, it is remarkable that the idea of progress has survived at all. It has, but it has become ever narrower in scope. Today, the idea that change means progress is being largely kept alive in this country by the ad men. Change equals progress has become almost entirely a materialistic concept, with consumer goods being planned for obsolescence. We continue with the idea, if it is related to material objects, but we have become increasingly conservative about equating progress with change in other areas. (12)

Generalization

All of us have been a part of societal and professional change. We are not reluctant to consider change but question change for the sake of change.

SOCIAL ORGANIZATIONS

Modern society is, more than anything else, an organizational society. The industrial and post-industrial Western Civilization produced a profusion of large-scale, complex administrative organizations that pervade many aspects of social life. Complex organizations today dominate not only business, industry, government, the military, education and health, but have been extended to research, mass media, mass culture, labor and recreation. Most will say it is safe to predict that in 2000 we will be even more of an organizational society than we are today.

Generalization

I would predict that before 2000 there will be two standard publications added to the reading list of those studying organizational theory. *The Organization Woman* will be as much a classic as *The Organization Man* and *The Woman in the Multi-Colored Polyester Pant Suit* should become a best seller to equal *The Man in the Gray Flannel Suit*. Following the publication of this classic, I facetiously discussed a sequel — *The Woman in the Gray Flannel Suit*. I even suggested the following chapters —

The Professional Woman Who Lives Alone
The Professional Woman Who Lives with Another Woman
The Professional Woman Who Lives with a Group of Women

The Professional Woman Who is Married and Lives with her Husband
The Professional Woman Who is not Married and Lives with One Man
And at that time I wasn't aware of professional women who were not married and who lived with a Group of Men.

If Cal were to write the *Godmother* and Celeste were to write *The Organization Woman* or *The Women in the Gray Flannel Suit* and the profits were to be distributed to organizations to which they belong, our professional men and women would not have an increase in dues for many years.

SOCIAL CHANGE

The pessimism about laws of social change is scarcely warranted. Sorokin and McIvers stand out as scholars in sociology who show a major concern for changes as a part of the very nature of social existence rather than as a regrettable disturbance. Two studies, The Sociology of the Bicycle(1) and The Decline of the American Circus: The Shrinkage of an Institution(11), are recommended for future reading. These two studies make us aware of the possibility that the innovations, institutions, and customs we accept and enjoy may also be the victims of the same forces which were responsible for the demise of the circus.

Generalization

We have been conditioned to view innovations and inventions as opportunities rather than threats. The TV children will experience the same nostalgia when TV is replaced as some of us experienced when the circus did not come to town each summer. Interestingly enough, TV does include The Big Top programs but we still miss the smell of the peanuts, caramel corn, and the possibility of talking with the trapeze artists or Bozo the clown.

ORGANIZATIONAL THEORY

Research in this general area has revealed that human behavior, as a result of organizational life, manifests remarkable similarities as one moves from hospital, to school, to retail store, to welfare agency, and to the military unit. For example, teachers and nurses react similarly to dysfunctional effects of status hierarchies within their respective organizations. Thus, while we are particularly concerned with professional organizations as one kind of formal organization, we may benefit from studying organizations in general. (2)

Some organizations change haphazardly, by what is described as organizational drift. That is, organizations evolve, adjust, and readjust seemingly unaffected by conscious efforts of their constituents. The antithesis of the drift phenomenon is planned change. Here, organizational changes take place as a result of conscious, rational efforts by those individuals who are in decision making positions in the organization.

But, according to many who have studied social organization, there is evidence that organizations are not characterized by change. When organizations are viewed over a long period of time, their outstanding characteristic appears to be stability, rather than change. Most organizations come into existence with a great deal of built-in stability and this stability is so great as to constitute a powerful resistance to change.

Generalizations Regarding Conditions Which Impede Change

1. The number of innovations is inversely proportional to the tenure of the chief or head administrator.
2. The greater the emphasis on hierarchy, the less the possibility of change.
3. When change occurs, it will occur from the top down, not from the bottom up.
4. The more functional the relationship of sub-systems, within a system theory model, the less the change in an organization. "If you don't rock the boat, I won't." Change is close to being synonymous with conflict. Sub-systems resist and resist change.
5. Resistance to change may be rational and irrational.
6. The element of personal identification with a group may make it difficult to be objective regarding change, especially if the change is to dissolve the group. (2, 10)

Generalizations Regarding Conditions Which Aid Change

1. Since the tendency of organizations is to maintain a steady state, the major impetus from change comes from outside rather than inside an organization.
2. The degree and duration of change is directly proportional to the intensity of the stimulus

from the external environment.
3. Change in an organization is more probable if the successor to the head administrator is from outside the organization.
4. Organizations respond to increasing stress first by a lag in response, then by an over-compensatory response, and finally by collapse of the system. Revolutionary change occurs when this is carried through to completion.

Generalizations Regarding the Nature of Highly Effective Groups (Now referred to as organizational health)

1. No single group or organization dominates the life of any member. If this were the case, there could be poor health for the individual and the organization.
2. The group has been in existence long enough to have established or developed a relaxed working relationship among members.
3. Members are attracted to it and are loyal to its members and leaders.
4. Members and leaders have a high degree of confidence and trust in each other.
5. Members have helped shape the goals and are satisfied with them.
6. Members will assist the group achieve its central purposes.
7. Respect is shown for members with whom there is disagreement.
8. The group is willing to participate in a self-study.

A funny thing happened to me on the way to Asilomar — I bought a book! I had just finished reading *Zen and the Art of Motorcycle Maintenance* so I was hopeful that *Zen and Creative Management* might be meaningful and provide me with some additional information in the area of organizational theory but this was not the case. There are, however, two quotes which pertain to organizational theory.

> Jaques has been responsible for showing how the psychological make-up of people profoundly affects organization behavior . . . . He believes that psychoanalysis can provide the framework for describing human nature in a way that can be understood by managers and so enable them to take it into account in a conscious, rational way when considering problems of organization.(6, p. 110)

The second quote has particular meaning during a time when there are recognizable conflicts.

> It has been said that conflict and tension are not necessarily undesirable within an organization. Indeed, the dimensions of the company are such that, to the extent that they are delegated as clearly as possible, they will generate conflict. This conflict will provide the basis for growth in the company, provided that it is given the opportunity to be expressed in a meaningful way. Discretion is capacity in action, and we can now define capacity as the power to perceive ideas that will resolve conflict in such a way as to enable growth, expansion, and self-regulation to occur. (6, p. 111)

I would like to close with a quote which Stevenson used when quoting Plutarch, "Only those persons who live in obedience to reason are worthy to be accounted free. Only they live as they will who have learned what they ought to will." (9, p. 82)

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NCPEAM IN TRANSFORMATION

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Originally, I had planned to deal with both NCPEAM and NAPECW in transformation, but the NAPECW part of the assignment was quickly penciled-out after the Program Committee examined my VITA and found that I had spent 16 of my last 17 professional years in the department of physical education for men. Therefore, what could I know about The Other Half?

But interestingly enough, when the men and women on our campus finally did consolidate departments, I found that we used many terms and phrases in common; even our goals were the same. Apparently, our progenitors were identical and all the years of separation had little effect where it really counts.

So in my few minutes today, I will attempt to provide you with some idea of the forces that have been pulling and bending and twisting NCPEAM over the past few years. But first, a little background on NCPEAM's heritage. We've been around a while — the NASH members know that Wm. G. Anderson was largely responsible for calling that first meeting in 1897 — and the name chosen Society of College Gymnasium Directors. Eleven years later we became the Society of Directors of Physical Education in Colleges, but in 1933 we gave up society status and opted for a new name: the College Physical Education Association or CPEA. Then, in the early sixties, the organization concluded that we needed National in the title because the scope of CPEA was not immediately apparent. Were we a local organization, a state group, or what? To illustrate the problem, our 1962 president was once representing the organization at the installation of a university president. He was introduced as president of College Physical Education Association of North Carolina, his

home state. So in 1962 we voted to add the word National and add the word Men to the title — thus NCPEAM came to be. This was one of our early cooperative ventures with NAPECW as we easily could have left the "M" off.

We often have been asked why NCPEAM has no district associations as part of its structure. While there may be numerous and complex reasons for this, I am not aware of them and submit that the explanation lies with the following:

Until 1957, our organization (then CPEA) had never held their annual meeting west of St. Louis. By truncating the country in this way, the problem of travel was markedly curtailed and if one is dealing only with the eastern one-third of the U.S., and St. Louis is the far West, then the need for district associations is not a major point of debate. As a former Easterner, I think I understand this mentality, but I can assure you that Western physical educators neither understood nor were amused by it. In the years 1946, 1947, and 1948, a total of only five Westerners attended the annual meeting of NCPEAM. Finally, in 1948, E. C. Davis, a former president of NCPEAM, began a movement to create a western division of the association. The Westerners were enthusiastic about the idea and in 1949 a formal proposal was sent to NCPEAM for action. This proposal was subsequently referred to a series of study committees which took no action, year after year, until 1956 when the study committee was discontinued. During these years, the Executive Council of NCPEAM made no report to the Westerners.

The Western people had had enough and in 1956 they formed an autonomous group called the Western College Men's Physical Education Society (WCMPES). Perhaps because of the formation of WCMPES, the national group began meeting in the West as part of a new rotation plan and, since 1957, NCPEAM has held five of their meetings west of the Rockies. In each of these instances, WCMPES has voted not to hold their annual meeting, but to throw their entire support behind NCPEAM'S effort.

However, unlike the NAPECW districts, the Western men are not represented on the national board, nor are they now mentioned by name in the NCPEAM Constitution and by-laws; WCMPES is considered to be an affiliated group. This state of affairs does not seem to bother WCMPES; in fact, I cannot recall anyone ever making a point of this at the WCMPES meeting. This group — the flip side of WSPECW — is not the typical professional association, (some refer to it as Maverick I) but they are a fine group and have been very vital over the years, and the odds are good that this will continue to be the case.

With this background, I now wish to bring you up-to-date regarding NCPEAM and how it is deeply in the throes of change. There seem to be 3 major areas each acting figuratively (and perhaps literally) like large coronary arteries. These areas are: the recent change in our business and program structure; the recent change in the nature of our membership; and the rapid rise in the incidence of joint projects with NAPECW. I will address each one in turn.

1. **Business and program structure.** During the years of the sixties, NCPEAM was quite stable in so far as its infra-structure was concerned. The activities of its annual conferences revolved around the sections of teacher education, basic instruction, research, intramural athletics, intercollegiate athletics, and history of sport. Clearly this structure was anachronistic, as intramural athletics, as then constituted, and intercollegiate athletics no longer held much interest for the majority of NCPEAM members. And the research section followed the format we are all so familiar with. Most anything could be included so long as it could be presented in 12' with 3' for questions.

These were also the years when the so-called sub-disciplines of physical education were on the rise but, of these, only History of Sport held a place in the structure. This section was added in 1960, largely as a result of S.C. Staley's eloquent support at a business meeting. But where were the other rapidly emerging aspects of physical education? The philosophical, the psychological, the sociological, the physiological, the biomechanical, and the comparative? The patient needed somewhat radical surgery.

Enter a President's Structure Committee in 1970, headed by Wayne Brumbach. Wayne and his committee began at the very beginning and asked questions about purposes; they analyzed why NCPEAM had lived so long, what was unique about it, who was it trying to serve, and, finally, how can it *best* serve (1).

This methodical, tree-shaking procedure eventually brought down a whole series of new insights into how NCPEAM should be organized. There basically would be 3 types of scheduled meetings, General Sessions, Divisional Meetings, and Special Interest Groups: the General Sessions were designed to deal with the larger issues of the profes-

sion, which affect all members. Divisional Meetings would make up the bulk of the annual conference. Included were the areas of *Sport and Leisure programs* (basic instruction, intramurals, intercollegiate athletics, sports clubs, and campus physical recreation), *Professional Preparation* (largely concerned with teacher education but would involve graduate as well as undergraduate programs), *Body of Knowledge* (this division includes the gamut of sub-disciplines, from philosophy to physiology). Special Interest Groups were designed for those members who have quite narrowly defined subjects and who wish to hold these discussions in an unstructured meeting, e.g., Accountability, P.E. Major Clubs, Faculty Exercise Programs, Promotion and Tenure, etc.

2. **Nature of the Membership**. However, some of our members are not enchanted by this new structure, now three years old. It is their feeling that by eliminating the research section and the History of Sport section we inadvertently snipped-off the buds of interest that were rapidly developing in the sub-disciplines. The term "splinter-groups" had its genesis, and many in our ranks are wont to see a cause and effect relationship between the restructuring of NCPEAM and the splintering of the body of knowledge.

I don't think there is any doubt that NCPEAM has lost members to some of the emerging sub-disciplines, but I seriously question whether our new structure had all that much to do with it. NCPEAM, and likewise NAPECW, cannot be all things to all people. For example, the American College of Sports Medicine, now up to a membership of close to 3,500 added 80 new members this year. Like NASH, they hold a three-day annual conference, and for the specialists in these areas, attendance is nirvana-like. There is obviously a need for in-depth treatment of elements of our own subject matter.

Ideally, college physical educators of all stripes would attend NCPEAM, or NAPECW, and also attend the appropriate conference in their area of specialization. Many of you in the audience do this very thing. But a combination of factors tend to work against this:

A. Economics — less money is available for travel, so priorities must be made.

B. Promotion and tenure — Young people entering college and university teaching today find that the rules of the game are quite different from those you and I first played under. One must still score points, but there is now a restriction on the number of ways this can be done; also, some ways produce more points than others. For example, where many University Committees on Promotion and Tenure are concerned, the pecking order is headed by publication in refereed journals and there may even be a pecking order within the refereed journals, e.g., only the top 3 carry much weight. I could go on with this, but you are as well aware of the problem as I am. The point is, that unless the young assistant professor gets cracking on research or other scholarly activity, he/she may not be around to enjoy our company at places like Asilomar or Orlando.

And I would like to reiterate a point made by Dave Bischoff (2) a few years ago. He noted that we have been training each generation of graduate students with more specificity, with the result being that we are producing more people who are reaching higher capabilities in increasingly narrow areas and who, at the same time, may have less of a sense about what physical education is. Thus, if we are not careful, we could be charting our own extinction. And we must not forget the fact that, over the years, the bulwark of the NCPEAM membership has been the administrator, the coordinator, the head, the director, the dean. It has been this person who, subtly or otherwise, has done the heavy recruiting of young members. Stories about scheduling the Ph.D. final exam only *after* the candidate had joined NCPEAM, while perhaps not totally true, did bring home the point about the need for professional commitment. Today, the harried administrator may even forget to attend that final exam.

3. **The Rise of Joint Projects with NAPECW.**

NCPEAM and NAPECW have had joint committees for years but it was not until the QUEST project was initiated by NAPECW in 1960-61 that there was much more than talk. In this venture it was NAPECW that led the line but NCPEAM did follow. With dues set at $5.00 in pre-QUEST years (and a membership of 800) we should not be overly critical of NCPEAM's hesitancy at putting $4,000.00 into the project when you realize this was their total budget for the year. It was the success of QUEST which paved the way for subsequent cooperative efforts. We owe much to that first editor,

planner, and negotiator, Donna Mae Miller and her associate editor, E. C. Davis, and we owe much to NAPECW for its vision. At last our scholars, young and old, had another outlet for their ideas and talents.

An NCPEAM survey, conducted in 1969, revealed a strong desire on the part of the respondents to hold a joint meeting with NAPECW. There were 230 for and 70 against. But aside from cooperating on educational displays and keeping historical records in the same library, major efforts were not forthcoming until 1971 when a Joint Conference and Projects Committee was formed by the respective presidents, Catherine Allen and Chalmer Hixon. This Committee endorsed a proposal for joint meeting of the two associations in late 1972 or early 1973 and, further, it was generally agreed that both organizations need to make concerted efforts for greater involvement of their younger members and that joint activities could be a good channel for moving in this direction.

Beginning in 1973, NCPEAM has invited members from NAPECW to attend its conferences in Pittsburgh, Kansas City, Phoenix, and Hot Springs. They have been program participants in each of the last two years.

Also in 1973, NCPEAM formally invited NAPECW to join in the creation of a jointly sponsored structure for the support of special projects. It was believed that close cooperation in specific enterprises could yield impressive benefits for both organizations. And further, it would extend the work of both groups well beyond the confines of their annual and biennial conferences.

NCPEAM was prepared to conduct these projects alone and created a new dues structure to fund them. But ideally, the organizations would combine their resources; a larger financial base would enable the undertaking of more substantive enterprises.

As you know, NAPECW agreed to join NCPEAM as a full partner in these projects which are carried out by two small working committees, the Committee for the Advancement of Scholarship and the Professional Directions Committee. A third Committee, the Project Advisory Board, monitors and exercises an advisory influence over the operations of the CAS and the PDC. To this date, several conceptualization and design grants have been funded and Briefing #4 is ready for the printer.

In 1974, NCPEAM and NAPECW agreed to exchange liaison personnel; this was not exactly a joint project per se but, as it turned out, the exchange led to involvement with the joint projects as the need for increased administration became apparent. With different fiscal years, different terms of office, and different meeting times, there truly was trouble in River City. Not only were the rotating committee appointments a nightmare for the presidents but even the treasurers had problems as the two associations had asynchronous schedules of payment to the QUEST and PAB accounts.

In 1975, NCPEAM agreed to join NAPECW in the development and mailing of an opinionnaire to both memberships. The plan had emanated from an NAPECW Board of Directors meeting in Boyne Highlands, Michigan, August 1974. The purpose was to sample opinions on (1) the preferred month of year for joint meetings, (2) which cooperative or joint projects should the associations foster, (3) what options should the associations investigate with regard to future cooperative efforts.

The results of the survey were presented and discussed at a joint, Open Forum during the 1975 AAHPER Convention in Atlantic City, New Jersey. These results were subsequently published in association newsletters and in Update.

Following the Open Forum, both boards met in a joint session. One outcome was the appointment by Presidents Husman and Jewett of a Committee on NAPECW/NCPEAM Future Relationships.

The charge for this committee was two-fold: (1) review the current statements of purpose of both organizations and develop a statement of purpose that would be appropriate for a combined organization, (2) develop and submit to both boards, alternate plans, including procedural steps, which could lead to an alliance or merger of NAPECW and NCPEAM.

The work of this committee was reviewed three months later at the NAPECW Board of Directors meeting in St. Louis. During these discussions it became clear that real planning, or tight administration of the joint projects, was next to impossible when the two associations never met at the same time unless special arrangements were made. Thus, the Council of Eight concept was proposed. Its make-up and function are reported elsewhere so I will not go into it here. However, since the Council of Eight was approved as a necessary and temporary (January, 1977) alliance structure, it has met successfully in Hot Springs,

Milwaukee, Santa Cruz, and Asilomar. While not resolving all of the administrative problems of our close, working relationship, it does much to make our efforts and planning more efficient and more intelligent.

And lastly, in 1975 it was agreed that the two organizations should hold their *first* joint conference; this will be in Orlando, Florida, January 1977. Another joint conference is planned for Denver, Colorado, in June of 1978.

You might ask, why so many joint efforts all of a sudden? Why did it happen? What was the catalyst? Quite simply, I think the rapid expansion of knowledge is the answer. You and I are desirous of staying knowledgeable about our own field and, if possible, we would like to be on the "cutting edge," as Betty Spears puts it. Obviously, such tasks are better done jointly.

Now, where do we go from here? As the professor says, that's another seminar-may be. But I sure hope we conduct it jointly!

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Forum Focus: NAPECW Referred Paper

ATHLETICS: THE SKELETON IN EDUCATION'S CLOSET

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Although people are in great disagreement as to what education is, most Americans would agree that education in this country is based on democratic principles. Jefferson first stated these as "self evident" truths. This means that the elements of education in a democracy rest on a deep conviction of the uniqueness, dignity, and worth of the individual person; responsibility for one's own actions; the belief that government is controlled by the citizens for the good of all and is not a value or end in itself. Since American education is concerned with democratic living, all programs in the school attempt to contribute to some degree to this concept. Many programs justify their being in the school by stating their educational benefits in terms of what they contribute to democracy. A typical pronouncement by the Educational Policies Commission in 1954 illustrates this.

> Participation in sound athletic programs, we believe, contributes to health and happiness, physical skill and emotional maturity, social competence and moral values.
>
> We believe that cooperation and competition are both important components of American life. Athletic participation can help teach the values of cooperation as well as the spirit of competition.
>
> Playing hard and playing to win can help build character. So also do learning to "take it" in the rough and tumble of vigorous play, experiencing defeat without whimpering and victory without gloating, and disciplining one's self to comply with the rules of the games and of good sportsmanship.
>
> Athletics may also exemplify the value of the democratic process and of fair play. Through team play the student often learns how to work with others for the achievement of group goals . . . [1]

[1]Educational Policies Commission, *School Athletics: Problems and Policies*, Washington, D.C., 1954, p. 1.

Athletics do, of course, have the potential for all those wonderful benefits. However, some people feel that this potential has been prostituted. Even some educators hold this view. It is from this vantage point that this paper was conceived. Athletics are seen in this context as the skeleton in education's closet because it is the intent to convey the idea that people in education are aware of the evils in athletics but will not acknowledge those evils to themselves or to the public at large.

There are many people in education, particularly those directly concerned with athletics, such as administrators, athletic directors, and coaches who do not consider athletics as a skeleton in education's closet. Quite the contrary, they consider athletics as *one* of the most important, if not *the* most important, aspect in the school curriculum. They can and do present a strong argument for this position. Let us examine a few of the reasons for this positive image of athletics.

One of the best reasons given in support of athletics is the fact that schools should provide for the full development of students in all areas and certainly the physical should not be neglected. Athletically gifted students deserve the same opportunities as the gifted student in math, English, or any other subject. As a matter of fact, athletically gifted students have a better opportunity to develop their talents than any other group of gifted students. All the ingredients necessary for maximum development are generally available to these students. They have ample support of parents, community and school administrators (sometimes too much support). They are exposed to some of the most dedicated teachers in the profession. Coaches would have to rank at the top in terms of dedication, if dedication is measured by number of hours spent on the job. They would also qualify as having great expertise in being able to teach. Those who can't teach are usually out of work, because the degree of their teaching success is always measured by the won-lost record. Another ingredient which should contribute to the success of gifted programs is sufficient budgets. Athletic programs are often funded to a greater degree than any other area in the school curriculum. Granted, many of these programs are revenue producing, but all of them have to receive taxpayers support in one way or another. One final ingredient which should be mentioned in regard to gifted programs is the fact that students in such a program must be motivated. Athletes must surely be among our most motivated students. They spend anywhere from 2 to 4 hours in practice 5 days per week. In addition, week-ends are usually spent playing in athletic contests.

Another convincing argument for the value of athletics is exemplified in the following quote from the book, *Sport: Mirror of American Life*, by Robert Boyle.

> Sport has often served minority groups as the first rung on the social ladder. As such, it has helped further their assimilation into American life. It would not be fartetched to say that it has done more in this regard than any agency, including church and school.[2]

That is a pretty strong argument. Most people would agree, in fact, that sport has always been viewed as the great equalizer. It undercuts social background as a basis for status.

A third reason often given on the positive side of athletics has to do with school loyalty. Athletics in high schools frequently provide entire communities with a common bond to the school. In most instances this is the only tie people have with secondary education. And certainly athletics for college grads are a strong tie to alma mater. Again this is often the only tie, and sometimes a tie that manifests itself in large gifts to an institution. Many state university presidents appear to be of the opinion that athletics are also important in gaining the loyalty of state legislators. Winning teams, according to such opinion, result in large appropriations for a school.

Frederickson alluded to this loyalty and to the positive aspects of athletics when she wrote:

> . . . why are the football stadiums not demolished to make room for laboratories of science and research and for conventional classrooms. From the cultural point of view one answer might be that a stadium is something infinitely more than a huge construction of wood, steel, and concrete. Each one has a personal history, and while each means many different things to different people, a stadium always stands as a symbol of man's love of a

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[2]Robert Boyle, *Sport: Mirror of American Life*, Boston: Little Brown & Co., 1963, p. 100.

> contest, spectacularly staged. They are monuments to the pride of individuals, institutions, and nations in the skill and prowess of their youth. They are an affirmation of a philosophy of life that insists man's life is better and fuller for having such moments of excitement and splendour, and that fitting homage should be paid the heroes who bring such color and emotion into the life of the average citizen.[3]

These then are some of the positive results of athletics. There are others which are probably more important. For example, there is an obvious ommission. The idea that athletics build character has been intentionally omitted. Ever since the article by Tutko and Ogilvie appeared in *Psychology Today* entitled "Sport: If You Want to Build Character Try Something Else"[4] there has been an awareness that athletics may be as detrimental to character development as it is to its enhancement. The win-at-any-cost attitude would certainly raise questions as to the kind of character development which would take place in such an environment.

Now let us turn to another view of athletics. That is, why are athletics viewed by many people, in and out of education, as less than desirable, and why is this view never really heard. In order to examine this question and to develop the theme of athletics being the skeleton in education's closet, an athletic family will be created. Families consist of grandparents, parents, aunts, uncles, children and in some instances nursemaids, godparents, and black sheep. Our athletic family will have all these characters, but with somewhat different names. For example, the godmother in the fictitious athletic family will be the Association of Intercollegiate Athletics for Women (AIAW), and of course the National Collegiate Athletic Association (NCAA) is the godfather. (Governing bodies of high school athletics may be substituted for the college sport governing bodies.) College presidents (or high school principals, as the case may be) assume the role of grandparents, the athletic directors the parents, the faculty become the aunts and uncles, coaches the nursemaids, athletes the children, and the black sheep is Title IX. Each of these family members will be discussed so that we may better understand their role in regard to the skeleton in educations' closet.

First to the godparents. Joe Paterno summed up many peoples feelings about our godfather, the NCAA, when he said:

> What's happened is that the NCAA, like a lot of bureaucracies, has tried to pull more and more power to itself. As a result, it has extended itself into areas where it doesn't really belong.[5]

What Mr. Paterno is referring to here is that the NCAA has so many rules and regulations that it is impossible to police and enforce them. The sports pages and popular magazines are full of stories having to do with unethical practices in college athletics. Mr. Paterno suggests that the NCAA should remain in the business of providing national championships for colleges, but that it should get out of the police business. The policing of athletics should be left to each individual institution.

What about the godmother, AIAW? When this organization was formed in 1972 many people felt that there would be a day of enlightenment in college athletics. Women are supposed to be more gentle, sensitive and possess all the other wonderful qualities of human beings. They would certainly never want to win at any cost! Unfortunately, this has not proven to be the case. It has been found that wanting to win is not a sex based characteristic. As a matter of fact, neither are any of the other qualities just mentioned. These are human qualities. Women certainly have no corner on athletic morality. Some of the women in AIAW have tried to pass legislation which would give institutions control of athletics, but

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[3]Florence Frederickson, "Sports and the Cultures of Man", in *Science and Medicine of Exercise and Sport*, 2nd Edition, Warren R. Johnson and E. R. Buskirk (eds.), New York: Harper and Row, 1974, pp. 433-34.

[4]Bruce Ogilvie and Thomas A. Tutko, "If You Want to Build Character Try Something Else", *Psychology Today*, October, 1971, pp. 60-63.

[5]Gordon White, "How to Save Intercollegiate Athletics," *Phi Delta Kappan*, October, 1974, p. 109.

these efforts have been unsuccessful. It appears that the godmother is following in the footsteps of the godfather. A good illustration of this is revealed in a statement made by one of the women athletic directors at the AIAW delegate assembly meeting in Scottsdale, Arizona in January 1976. The remark was, in essence, that she wished AIAW would pass some rule during the 3 day meeting that had not been copied from the NCAA handbook. In other words, the AIAW organization brings to mind the Biblical saying from Ecclesiastes 9:1 "there is nothing new under the sun."

Grandparents in some families are regarded as a source of wisdom and in some instances give substantial financial assistance. High school principals and college presidents are the grandparents in the athletic family. The wisdom of some of these people may be questioned but most people would agree that they are generally most responsive to the financial needs of their family. Their role, in regard to keeping athletics in education's closet resides in the fact that they too are aware of the positive and negative aspects of athletic programs, but they never mention negative aspects for fear of losing support of the public. The public of course supplies the money!

There are some college presidents who do not fit this sterotype. Douglas Moore, president of Mankato State University in Mankato, Minn., is one exception. Late last summer he became a critic, as one sportswriter put it, of the cornerstone of American education, the football scholarship. Dr. Moore was quoted as saying:

> We could stop purchasing the skills of quarterbacks and tight ends. We could put money into programs rather than individuals.[6]

The interview was concluded with these remarks from Dr. Moore:

> Somebody, and that's the president, has got to take the total institution in mind in his decisions. There is an element of arrogance in that statement, I know. But it cannot be left to the fragmented constituencies of a university. I may go down in flames, but if so, it will be with two principles intact: Sound fiscal operation and equity for all students.[6]

There are many people who wish other college presidents would take such a stand.

If you remember, athletic directors are the parents of the athletic family. Parents have a terrible time in our society. Almost as bad a time as teachers. They get all the blame when children do poorly, but rarely any credit when they do well. So it is with athletic directors. Winning teams do not bring them glory, but losing ones may bring them unemployment. What then do they contribute to athletics being a skeleton in education's closet? Their contribution is that they present athletics as the ultimate human experience knowing probably better than anyone else in the family, that many athletic programs are indeed educations' Watergate.

In American families, nursemaids may be a thing of the past but they still exist in the athletic family in the form of coaches. Everyone knows what a nursemaid is. This is the person in the family unit who has total responsibility for the children. Among other responsibilities they see to it that the children are well groomed, go to school, and do their homework. They may even tuck them in at night. Above all, they see to it that the children have no undue responsibilities which would hinder their play time.

In the athletic family, nursemaids are perhaps the greatest victims of the system. How many people would like to have their jobs depending on whether an 18 year old catches a pass? Another reason why it is sad to have nursemaids victimized is because many of them philosophically have an idealistic view of athletics. A great number of coaches probably chose this field because of their belief that athletics is play. Play was described by the Dutch philosopher, Huizinga, as follows:

> Play has a tendency to be beautiful . . . Play casts a spell over us, it is 'enchanting,' 'captivating.' It is invested with the noblest qualities we are capable of perceiving in things: rhythm and harmony.[7]

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[6]Larry Batson, "Full Ride in Mankato Sports Is For All Students," *Minneapolis Tribune*, December 10, 1975, p. 1C.

[7]Johan Huizinga, *Homo Ludens: A Study of the Play Element in Culture*, New York: Harper and Row, 1970, p. 10.

However, the relationship of play to athletics seems to somehow diminish as the desire to succeed becomes overwhelming. Webb in an article, "Professionalization of Attitutes Toward Play Among Adolescents" describes what happens when child's play becomes athletics.

> Child's play is child's play because it is simple, has relatively little organization, allows anyone to play, and offers few rewards based on measurable differences . . . the question of skill is incidental.
>
> Fairness is of utmost importance in child's play. Children need few rules (actually rules are often made up as games progress). Children need no referees because they are capable of enforcing rules themselves.
>
> However, as children progress from child's play to athletics, the emphasis shifts from one of fairness and total participation to one of success (the win at all costs ethic) and skill becomes much more important than fairness.
>
> In a simplistic way there is a parallel here to other aspects of society. In politics and in business it seems to me that at the beginning levels fairness is understood and practiced, but as businesses thrive and politicians become famous, the fairness value is forgotten and success and skill become the foremost considerations.[8]

If somehow we could return to child's play, athletics would no longer be the skeleton in education's closet. Unfortunately, this does not seem the case. So let us proceed with a description of the remaining members of the athletic family. The children posing as athletes, the faculty as aunts and uncles, and the black sheep in the form of Title IX.

George Leonard is of the opinion that inside every person there is an athlete waiting to get out.[9] Although Leonard was speaking of this in a very broad sense, Wm. F. Buckley, Jr. wrote a wonderful essay on the phenomenon of the athlete in all of us. Following is an excerpt from that article which had a subtitle of "The United States of Sports."

> Is it because there are more people who would like to be successful athletes than who would like to be say, successful musicians? — or poets or writers, or politicians? Is it because the notion is popular that the great athlete is, but for the capricious working of the stars, really what you and I might have been, if it had happened that our lungs had been a little stronger, our limbs better coordinated, or our resolution more iron: whereas the great musicians and poets, and even the actors and writers are a species apart, minted in Olympia by artisans who would be all thumbs if asked to produce a shortstop? Do they feel that Dimaggio was just that little critical step better than Johnny, who concededly is not a member of the same human family that produced Einstein or Freud?[10]

Poor children, athletes! They are a breed apart and yet people feel that they are not really very special. It is a great paradox. Society treats them in a special way and certainly they think of themselves as special, but nowadays there are so many of them that it is difficult for people to identify a true super athlete. The children in the athletic family suffer as much or more than the nursemaids. They, the children, spend eight to ten years of their lives (some many more years depending, of course, on when the athletic career begins and ends) having almost everything done for them and being respected and admired by their peers and the public at large. Then suddenly the game is over. The children have virtually nothing to show for their years in athletics. Nothing but memories. Perhaps that is enough, but judging from the books written recently by professional athletes it would appear that the children have suffered a great deal by being the skeleton in education's closet. It is time to have some definitive research done to determine what the outcomes of athletics are in terms of the

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[8]Harry Webb, "Professionalization of Attitudes Toward Play Among Adolescents," in *Sociology of Sport*, Gerald Kenyon (ed.), Chicago: Athletic Institute, 1969.
[9]George Leonard, *The Ultimate Athlete*. New York: The Viking Press, 1975, p. 3.
[10]Wm. F. Buckley, Jr. "Reflections on the Phenomenon," *Esquire*, October, 1974, p. 126.

participants. As a result of such research athletics might be restructured and become the cornerstone of education. Athletics have that potential. Ask any physical educator.

The role of aunts and uncles in a family may vary a great deal. In some families they are quite visible and held in high regard by other family members. On the other hand, aunts and uncles may not be held in such high esteem. Aunts and uncles who meddle in family affairs and who treat children with hostility and suspicion are obviously not well liked. So it is in the athletic family. The faculty who have assumed the role of aunts and uncles may either be loved or hated depending upon their relationships with the rest of the family. Their greatest responsibility for keeping athletics in education's closet is because they will not face up to the issue. They may give athletes, whom they happen to have in class, a very hard time, but they never raise any serious questions about the ethics of athletics. At least if these questions are raised, they are not presented to the right people at the right time. Faculties had a wonderful opportunity to do this as a result of Title IX. It is most unfortunate that this opportunity was not seized.

What kind of self-respecting family would not have a black sheep? The black sheep of the athletic family would have to be Title IX. This legislation which prohibits sex discrimination in all public schools and colleges which receive federal aid is certainly viewed as the black sheep by the athletic family — the male athletic family, that is. A black sheep is one which is unpredictable, does not live up to family expectations, and may sometimes cause embarassment to the family. It is almost, but not quite as bad as the skeleton in the closet. Title IX certainly meets all the qualifications for black sheepishness. It is unpredictable in terms of what effects it will have on men's athletic programs; it certainly does not live up to family expectations which say that only males are athletic; and it has certainly caused embarassment to the family in financial terms if in no other way.

The unfortunate aspect of Title IX as it applies to athletics is that the legislation was originally conceived as a way to curb professionalism in college athletics by providing girls and women with somewhat equal opportunities to participate in sports. Title IX did not reckon with human frailties. It appears now that the legislation will not curb professionalism in college athletics for men but rather lead to professionalism in college athletics for women. There is only one model for athletics. The male model. Although women had an excellent opportunity to alter that model or indeed create a new one, that opportunity seems to be gone. The pressures were too great. Whatever the reason, women's athletics joined men's in being the skeleton in education's closet.

Could this situation be corrected? The prospects are not bright. The reason for this pessimism is because the last study of college athletics was conducted by the Carnegie Foundation in 1929. The report caused a nationwide furor because of the findings which said among other things that athletics were "sodden" with commercialism and professionalism. The committee presenting the report recommended that there be an end to costly spectacles and a return to broader student participation in low-key intramural athletics. The Carnegie report on athletics raised two basic questions: (1) what does this kind of athletic display have to do with the work of an intellectual agency such as a university, and (2) how can students find the time to devote to athletics and remain students? Forty-seven years after the Carnegie report those same two questions are still being asked.

There is still hope, however, that reforms in athletics may take place. A study by the American Council of Education is presently underway. The task force has completed a six-month study and has requested a full scale investigation. Perhaps this committee will make recommendations which can be implemented to save athletics. We must have faith that the American Council on Education will have greater success in this regard than did the report of the Carnegie Foundation committee.[11]

Of course if our athletic family were to make some changes, athletics could be brought out of education's closet. Following are some suggestions for each of our family members which should help un-closet our skeleton.

The Godfather, the NCAA, obviously holds the key to athletic reform. Judging from rumblings coming from their meetings, there is some indication that a few member

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[11] "Sport Recruiting", *Reader's Digest*, July, 1974, pp. 105-107.

institutions are concerned about the professionalism of intercollegiate athletics. Perhaps men and women from NCAA and AIAW who share such views should lobby together to force the Godfather to change and maybe even to come up with a new model for athletics. A model which would eliminate one of the biggest evils, the athletic scholarship.

If the Godmother, AIAW, is not successful in changing the Godfather then my hope is that AIAW would herself create a new athletic model. A model that would include no athletic scholarships and no national championships. This is not intended to be, as you may be thinking, the old DGWS concept of athletics. Women should be given the opportunity for athletic competition at the highest level of which they are capable. But this competition should be in the perspective of a total college education. Winning a national championship should not become the sole reason for competing. Neither should students be paid to play. These practices seem somehow inconsistent with the academic goals of educational institutions. Many people feel that it is impossible to create a new model for athletics, but nothing is impossible. Who would have thought it possible, for example, that the athletic budget for women at the University of Tennessee, Knoxville, would go from virtually zero in 1972 to $125,000 in 1976!

The grandparents, which if you will remember, in our athletic family are the high school principals or college presidents, could do much to help the situation. Their greatest contribution for athletic reform could result from their insisting on faculty control. They could appoint faculty committees who are given the power to govern athletics. This committee could, among other things, approve the budget, travel, practice times, qualifications of coaches, eligibility of athletes, and in the case of college athletic committees, the recruiting and admission of athletes. (This is assuming, of course, that athletic scholarships still exist.) Strong faculty committees who have such power could do much to bring athletics even as they exist today out of the closet and into the educational mainstream.

Another way that principals and college presidents could help alleviate some of the evils of athletics is to budget for athletics in the same way that they budget for other programs. This would probably eliminate athletics altogether, but herein lies one of the biggest reasons for the closet image of athletics. If they are educationally beneficial, why do they have to be paid for through gate receipts. Why aren't we willing to budget for them as we are for other school programs?

A final suggestion for our grandparents, is to place athletics in an academic unit. The logical unit is of course physical education departments. The implication here is that in this situation there would be no athletic scholarships, no recruiting, no gate receipts and coaches would be treated as all other teachers with the same responsibilities and benefits. Athletics in this context could become the honors program of physical education. This appears to be a simple solution and in fact many schools now have athletics and physical education in the same departments. In these situations, though, athletics rule. What is suggested here is that athletics instead of being first should be last. By this is meant that school systems should first of all have quality physical education programs, followed by intramural programs which are available to all students, and *then* athletics. There would be no athletic programs until the physical activity needs of all the students were met first.

What about the parents in our athletic family? How can athletic directors masquerading as parents bring athletics back into some kind of focus? Perhaps the greatest contributions parents can make, in this regard, are in the areas of scheduling and dealing with coaches. Insofar as scheduling is concerned, athletic directors need to consider the athletes first. For example, contests should be scheduled in such a manner that a minimum number of classes are missed. A minimum number would preferably be zero. Most schedules, as you know, are developed with athletes given last consideration. Priorities in scheduling, as a rule, have been given to gate receipts and the prestige of the opponent.

Athletic directors generally have the responsibility for recruiting, hiring and maintaining the coaching staffs. A suggestion here is that athletic directors, along with coaches and players, develop a code of ethics. Coaches who do not adhere to this code would be fired. It seems that the foremost consideration of such a code would have to do with whether a coach kept winning in the proper perspective and had, as the number one consideration, the welfare of the athletes.

There are several ways in which coaches or nursemaids could make significant contributions which would educationalize athletics. The one area, however, which will be mentioned here has to do with being a positive role model. Coaches who treat players, officials,

and opponents with respect will field teams who behave in like manner. Coaches who can accept defeat without complaining and victory without gloating are also exerting a positive educational influence. Teams certainly mirror the personality and values of their coach. This being the situation, only people who are ethically sound should be allowed in this profession.

The children or athletes in our athletic family are not without responsibility for bringing about athletic reforms. Athletes owe it to themselves to place their education above athletics. They should insist on a broader educational experience at both the secondary and college level than total involvement in athletics affords. In addition to this, athletes need to demand ethical conduct from their coaches and, of course, they themselves need to demonstrate in their behavior the highest standards of sportsmanship. One final suggestion for athletes is that they recognize their limitations and that they accept the fact that sometimes they are beaten by a better performer rather than by better coaching or questionable officiating.

What about the aunts and uncles? What can they do to help the situation? If you remember, aunts and uncles represent the faculty in the athletic family. This group could have a great influence on athletics if they would somehow unite and ask some serious questions about such things as amount of money spent, number of students participating in the program, and the amount of time athletes spend in sports participation. Many faculties have asked these questions, but nothing ever comes of them. The reasons for this could be that it has never been a concerted faculty effort. There is much participatory democracy on most campuses these days and it would appear that if faculties really were concerned about athletics they could do something about the situation. This, however, may be wishful thinking.

The Black Sheep. Title IX could and may in the final analysis be the most important ingredient for causing an athletic revolution. If, in fact, schools are forced to spend more and more money for equitable athletic programs, then some schools will be forced to eliminate athletics as we know them. That might be the best solution. Or perhaps Marie Riley has a better idea. She proposes Title X. Her law would guarantee equal opportunity for non-athletes.[12] Our society seems to require that the only way to have equal opportunity in many aspects of our lives is through legislation. That is a very sad commentary.

According to George Leonard, the greatest possibility for reform lies within the athletes themselves. That is, the athlete waiting to emerge in all of us. Mr. Leonard illustrates this point in the *Ultimate Athlete* and it seems fitting to conclude with this quote:

> "... the desire for change in physical education and athletics is by no means confined to a small band of experimenters. There is a determined thrust toward reform at the very heart of the physical education establishment. There is a growing army of American joggers, hikers, swimmers, and bicyclists of all ages pursuing the joys of fine physical conditioning. And there are signs . . . that increasing numbers of athletes are beginning to find words to express those magical values in sports that make mere "winning out" seem empty indeed.[13]

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Some Late Models

CURRICULUM DESIGN

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While I know it can be dangerous to use analogies, I'd like to begin by sharing some of my observations on carpentry and plumbing to illustrate and propose some ideas about teaching and curriculum planning. First, some of the important differences I have observed between carpentry or plumbing and teaching:

1. Usually when I begin to build a bench, I end up with a bench rather than a flower box or some other non-descript object;
2. I know when a job requires a circular saw rather than a coping saw;
3. I know that in mending copper water pipes I have a choice between flanged and sweated joints;
4. I usually have confidence that I will reach a point where I will know if I have succeeded or failed in doing a job — I've discovered that relativity doesn't count for much in repairing leaky pipes;
5. And, I've observed that carpenters refuse to do plumbing jobs.

But, in teaching I think we don't always end up where we intended to; sometimes we're not sure which tool is right; frequently we're not aware of all the possible choices; sometimes we're not too sure how well we've taught an idea or a skill; and occasionally, we find ourselves trying to do jobs for which we have not been prepared.

But I've also observed some similarities:

1. Having the right tools available makes a big difference;
2. Having the right tools usually involves a search and an investment;
3. Sometimes tools cease to be useful and have to be discarded or stored in favor of more up-to-date versions;
4. And, after several costly errors, I have learned that practice is essential in learning to use tools properly.

What I'm suggesting is that as teachers, planners and researchers we need to take a look at our box of tools and the extent to which we are preparing our apprentices to use them. A plumber serves a five-year apprenticeship before he becomes a journeyman. I think we may be expecting too much of young teachers when we assume they are able to assimilate a lot of discipline-based courses into successful teaching and planning skills.

We have little to support the assumption that a young teacher will integrate courses in growth and development, professional orientation, bio-sociopsycho foundations of physical education, curriculum theory, methods of teaching and movement analysis into coherent planning and delivery behaviors. I'm more convinced this is true when I hear that many of our programs are largely determined by the availability of facilities. Often we teach swimming because we have a pool rather than building a pool because we believe swimming experiences are important. And my distress intensified when I read in the *Handbook of Research on Teaching* (1963:448-505) that teacher behaviors are influenced more by a teacher's own personal needs and background, by cultural tradition and probably even administrative policy than by a scientific knowledge of learning.

Many of my concerns were further clarified as I read Glaser's article in the last issue of the *Review of Education Research* (1976:1-24). He speaks of the need to develop design skills in the professions. In contrast to the descriptive nature of discipline-based research, the professions need to build skills for prescribing change. The work of the disciplines is to systematically describe how things are and how they work; the task of the professions is to develop designs for change — whether they be prescribing a treatment for the health of a patient in medicine, planning a bridge in engineering or designing a curriculum in physical education (Glasser: 1976).

To define the curriculum simply as a design for learning becomes a complex proposition if we attempt to identify the many factors which could, and should, influence that design. The incorporation of the research findings alone in a field as diverse as ours and at the present rate of proliferation is a large task. Combine that with a sound rooting in philosophical thought regarding what is possible, true and desirable in education, and the importance of being responsive to the uniqueness of the individual child, the local community and the aims of education and you probably have a young teacher who will follow last year's curriculum design.

I would like to see the curriculum represent the best of our thinking and research findings and believe that, in a sense, the curriculum provide the ultimate test of all educational thought and research. I am concerned with the identification and development of tools which will help us to design learning environments — models to structure our thinking — techniques and devices which will provide practice of these important design skills. Simon has noted that:

> Engineering schools have become schools of physics and mathematics; medical schools have become schools of biological sciences; business schools have become schools of finite mathematics. The use of adjectives like "applied" conceals, but does not change, the fact. (Simon:56)

And, may I suggest that schools of physical education are becoming schools of the scientific analysis of a moving being. Our students are becoming increasingly more proficient in the descriptive analysis of movement, an important skill, but not a substitute for the design of learning environments. Before I go further, I want to state clearly that I'm not suggesting an either-or proposition; we must continue and even intensify our research efforts — we must describe how things are and how they operate, because these are part of the stuff of which curriculum designs are made. But we must also look for ways to optimize learning and development, ways to synthesize and apply what we know about what exists, and ways to bring about desirable change.

Well, as I indicated earlier, the carpenter sometimes has to search for and invest in new tools. The rest of my paper will be addressed to plan for using three tools to teach curriculum design skills — a decision-making model, an instructional technique and a computer-based instructional system.

Decker Walker has proposed a model entitled the Naturalistic Model for Curriculum Planning which describes the decision-making process as it has been practiced in such modern curriculum projects as the School Mathematics Study Group Project and the Biological Sciences Curriculum Study. One of Walker's observations was that curriculists don't actually begin by stating educational objectives as generally thought. Rather they begin identifying a set of assumptions and beliefs concerning what exists and what is possible and desirable in education.

The first major component of the naturalistic model, therefore, is the PLATFORM which represents beliefs about what is true and possible and a vision of what ought to be and these

beliefs guide the curriculum designer in determining what must follow if that vision is to be realized.

Through DELIBERATION, the second formal element in the model, an effort is made to identify relevant facts, to identify decision points, to generate alternative solutions, to trace all the consequences of the various alternatives, and finally, to choose the best alternative.

The set of choices resulting from the deliberation process represents the substance of the final DESIGN and as such indicates a set of relationships believed to be capable of affecting students. It is this set of abstract relationships, rather than the materials in which they are embodied, which is of concern to the curriculum specialist. Walker further states that the interesting output of the curriculum development process is not a collection of objects, not a list of objectives, not a set of learning experiences, but a set of design decisions (Walker: 54). The justification of the design rests upon the logical defensibility of decisions — sometimes made because of constraints imposed by circumstance or at other times because of the underlying principles of the design.

Walker's model served as the decision-making model for the development of a PLATO lesson in physical education curriculum planning (Fry: 1975).

PLATO is an acronym for Programmed Logic in Automatic Teaching Operations and is the computer-based teaching system which was developed at the University of Illinois, Urbana. During the sixteen years since the development of PLATO I in 1960, the system has progressed through many phases resulting in the present PLATO IV system which currently has about 950 student terminals in operation throughout the nation.

The system includes a terminal which consists of a typewriter-like keyset that transmits the user's input to a central computer and a visual display which can simultaneously show computer-generated graphic information and computer-selected photographic color slides to the user (CERL, 1972). Their terminal has an optional audio response unit which provides random-access messages and a touch panel which allows the user to make a response by touching the screen. This device has been particularly useful in teaching reading skills to young children. As indicated in this slide, the young child can touch the picture of an animal and immediately see how the name of the animal is spelled.

Presently, there are approximately ____ hours of instructional material available in different subject matter areas. Just last week PLATO IV registered its 2 millionth student contact hour. Authors can write lessons on the same terminal used by students and the programming language (TUTOR) is based on English grammar and syntax so it can be used readily by teachers without a previous knowledge of computers.

The system was designed to accommodate a wide variety of teaching strategies from drill-and-practice to problem-solving and is capable of responding to the individualized rates and styles of student learners.

I will mention other features of the PLATO system as I describe the Physical Education Curriculum Planning lesson.

The techniques of simulation were used to present the theoretical structure and to provide a practical experience in physical education curriculum decision making. Basically, simulations are designed to provide the student with an artificial experience in a dynamic, real-world environment. They provide focused and active participation in a, so-called, slice of reality which is unencumbered with extraneous detail. The participant is taken from the role of spectator to player — where his actions serve to affect the model situation. (Tansey, 1971) Simulations can be useful tools for providing practice without costly errors.

The use of PLATO increases the potential of simulation techniques by providing the student interactive experience with a wider range of curriculum variables than is typically available. And it also provides immediate feedback to the student.

This is a flow chart representing the instructional logic used to present the program and shows the relationship between theoretical and practical aspects of the lesson.

As you can see, the program is comprised of two large sections: The MAIN SEQUENCE through which each student progresses at his own rate, and a HELP SECTION which makes various kinds of information available to the student whenever he wishes to use it.

The lesson begins with a scenario — a technique used to introduce the participant to the situation, to identify the task, and to clarify his role in the situation. In this model, the scenario takes the form of a letter of appointment from the school principal. The participant learns that he has just been hired at Lincoln Middle School and that one of his primary responsibilities will be to serve as the chairman of the physical education curriculum

committee. The need to change and revise the program is indicated, but the specific procedures for doing so are not.

At this point in the lesson, PLATO presents Walker's curriculum planning model and some descriptive detail of each stage in the decision-making process.

Next, the student is presented with a set of typical platform statements which serve as the basis for the planning process. It is pointed out that belief statements such as these are useful in the deliberation stage. The platform statements include, for example: man moves to fulfill a variety of human purposes, that it is possible to determine the purposes for which he moves, that it is possible to select movement activities which focus on various purposes, and that it is desirable to provide activities incorporating a variety of movement skills to fulfill the child's purposes for moving. These statements lead to such questions as: What are the purposes for which man moves? And, more particularly, what are the purposes for which the middle school-aged child moves? Data for these questions are drawn from Jewett's Purpose-Process Curriculum Framework (Jewett, 1973) which identifies 22 purposes for which man moves. In addition, an interpretation of the Battle Creek Curriculum materials by Chapman (1972) was used to draw approximate emphasis goals for these categories of purposes at different age levels.

With these kinds of data, range of movement purposes and emphasis values for age levels, the student proceeds to the deliberation stage where he assumes a much more active decision-making role.

First, he must develop an awareness of the local situation which could affect curricular decisions. He can asses the information available in the Help Section concerning student and faculty characteristics, the school organizational structure, facilities, equipment and the community. With the practical constraints of the local situation in mind, the student proceeds to select purpose concepts to emphasize within each instructional unit, to determine the extent to which each of the concepts will be emphasized, to identify alternative activities which will allow such emphases, and finally, to select an activity area for each of the instructional units.

The student recycles through each of three grade levels resulting in a final design, which is comprised of this configuration of purposes and activities. The student knows *what* will be taught, why it was selected, and when it will be taught.

This, then, is the simulated experience through which the participant goes in using a curriculum planning model and some curriculum concepts to make practical decisions. Although the simulation allows considerable individual flexibility, more importantly, it provides a structure, goals, and a process within which that flexibility can be exercised.

In the recent Report from the Carnegie Commission on Higher Education, Levien and Mossmann indicate that "the true test of the simulation is not *what* the student learns from it, but the questions that it causes him to ask." (1972:69) This model program is intended to stimulate questions of both a theoretical and a practical nature in physical education curriculum design.

The PLATO system provides the teacher with information about the decision-making behaviors of students. As each student moves through the lesson, PLATO records every student protocol — the nature of the response and the time that it was made. These data can be analyzed in a variety of ways to compare or contrast student performance, to identify trouble areas which may need improving or to determine whether or not the concepts are being applied in a meaningful manner.

To date about 120 undergraduate and graduate students have used the lesson. It takes an average of 90-120 minutes to complete and about 90 per cent of the students complete each of the three grades in decreasing amounts of time without showing deterioration in design characteristics. In general, students respond very favorably to the lesson; however, graduate students seem to find it most helpful as a way for structuring their thinking about curriculum design.

The model provides a rather straight-forward way of implementing a set of beliefs into action and seems to encourage a greater appreciation for the complexity of curriculum planning when all the variables are considered.

This lesson represents an effort to use the theoretical concepts involved in both Jewett and Walker's curriculum models, the technique of simulation and a computer-based instructional medium as tools for teaching curriculum design skills. There are, undoubtedly, many others which need to be tested and used.

I woud re-emphasize Glaser's concern for the development of design skills — of equipping our students, and ourselves, with the tools needed as they, and we, "profess" to facilitate change from ignorance to competence and from novice to expert. (Glaser, 9)

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MOVEMENT EDUCATION AND THE SCHEMA THEORY

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This afternoon I would like to discuss the common features between two, heretofore considered quite distinct, areas of concern: (a) movement education and (b) theory in motor learning. This is a rare treat for me to discuss ideas about theory in motor learning with individuals who are more knowledgeable about movement education than I am, as most of the talks I give are directed at audiences that are like myself. The uniqueness of the convergence of theory in motor learning and movement education will be underlined, perhaps, by noting that I come from a rather strict, experimental psychologically based, laboratory-oriented tradition in which research on artificial laboratory tasks with normal, adult subjects is emphasized. The notion of movement education, concentrating as it does on education and children, with an emphasis on values that are entirely different than those

present in a more theoretical science of motor behavior, has naturally made movement education somewhat foreign to me. Nevertheless, through contact with people like Shirley Cooper, a former colleague and dear friend, and Diane Ross, a former graduate student under my direction, each with interests in children's motor performance and programs in the schools, I have been able to come to at least a rudimentary understanding of what movement education is all about.

Movement Education Defined

Before I get too far, it will be helpful to define what I am going to mean by the term "movement education." As I am sure most of you are aware, there is no one point of view that can be labeled "movement education," but rather a number of related views with related assumptions, expectations, and goals have all been loosely given this label. Locke (1969) notes some similarities among some of these variations:

> "'Movement education' is used here as the generic label for all of the recently evolved physical education programs that use exploration and problem solving as a teaching method; that provide an array of experiences such as running, jumping, climbing, and swinging as lesson content; that use some portion of the language and theory of Rudolph Laban to organize content; and that have as an objective the improvement of the student's capacity to move" (p. 200).

In addition to these characteristics, movement education programs seem to be most strongly related to lower-level elementary physical education, they seem to have humanistic rather than pragmatic goals, they seem to be more widely accepted by women than by men in physical education (with men being more strongly oriented toward pragmatic sports-skills emphases), and they represent a clear alternative to more "traditional" orientations that stressed the development of skills in sports and games.

Another difficulty in defining movement education is that the various viewpoints vary somewhat concerning the relative importance of a number of distinct goals for the programs. For example, one goal is that students be encouraged to work at their own rate so that failure is minimized, so that the effects of individual differences in learning and performance are recognized. Some programs emphasize the development of self-actualization and socialization through the kinds of activities presented in the programs. While these are important aspects of all the programs, there is one major goal that seems to me to be paramount. Inherent in this goal is the assumption that complex movements done throughout life are based upon the assemblage of movement components that are learned earlier; these components have been termed "basic movements," "fundamental movements," "movement elements," or "patterns" by various writers. Essentially, the notion is that these elements are learned in earlier life through the various activities performed (such as jumping, throwing, striking, and the like), and then when a new act is to be learned later in life, the student can "piece together" these elements in a most efficient way to achieve the new motor goal. Thus, it is natural that movement education programs have always stressed strongly the maximization of the variety of movement experiences presented. The reasoning is that by providing many ways of, for example, jumping over objects of various sizes, shapes, heights, etc., one can thereby have more effective "elements" for the performance of the next jumping task (e.g., the running long jump in high school). It is this last assumption that will be the focus of the remainder of this presentation. In thinking about this last assumption over the past few years, it has become very apparent that there are a lot of difficulties with the idea of basic movement patterns and the development of movement elements for later transfer to novel skills; some of these difficulties are outlined in the next section.

Movement Education: Some Difficulties

The first difficulty I see with the movement education area is inherent in the above section concerning definition. The term "movement education" seems to have no specific meaning any longer, and the best that can be said is that the term stands for a general class of beliefs and assumptions about childrens' physical education. The lack of a clear-cut statement

makes it nearly impossible to generate specific predictions about the expected outcomes of the programs, and this makes scientific evaluation of the programs very difficult. None of the various positions is stated as a theory, with the attendant hypothetical constructs, postulates, and coordinating definitions that are usually considered essential for the generation of scientific tests of them.

Thus, the idea of movement education is more like a religion than a theory, with a number of loosely stated assumptions, methods, and goals for the programs. There seems to be little attempt to operationalize these concepts so that they can be tested in the laboratory. This is an important point, and I shall return to it in a few minutes.

The second difficulty with movement education, as I see it anyway, is probably related to the first. Because of the diversity of views about movement education, and because these views have not been stated in terms that can be operationalized, there are very few data that support the existence of such programs. First, the programs were apparently not based upon very much more than a dissatisfaction with the traditional (sports-oriented) programs plus a strong humanistic desire to provide more satisfying experiences for the students. But more serious is the fact that the programs, once in effect, were not seriously challenged or tested to determine their effectiveness in relation to the various goals. Along these lines, Locke (1969) states that:

> "... no reliable empirical data dealing with movement education has been published to make such a statement possible. Movement education was initially the product of data-free theorizing. This is an acceptable and sometimes necessary process. That movement education has so far *remained* in the schools as data-free practice is less fortunate and not acceptable" (p. 217).

As a scientist dealing with motor behavior, I find it incredible that such a large number of highly educated individuals involved in teacher education can believe so strongly in a doctrine of movement education in the absence of evidence that it does very much.

Perhaps the answer to this question lies in the fact that individuals who believe in movement education (educational revolutions in general, such as the "open classroom," the "new math," and so on) are seriously interested in making the world a better place for the students. The interest in this goal is so high, in fact, that there is sometimes a strong over-reaction to programs that appear, on the surface at least, to be able to solve some particularly objectionable problem not handled well by previous programs. A former professor of mine, Dr. Gene Glass who is now at Colorado, wrote a beautiful paper (Glass, 1968) entitled "Educational Piltdown Men," dealing with this phenomenon. Evidence of Piltdown Man, as you may recall, was "discovered" in Great Britain, and indicated that he was a strong candidate for the "missing link" that was sought after for so many years following Darwin's theorizing. Considerably later, Piltdown Man turned out to be a total hoax, but scientists of the day were so eager to believe the evidence that they did not question his validity. Along the same theme, Glass mentions a number of educational hoaxes that have been equally eagerly accepted without evidence. One of these is familiar to us all, dealing with the ideas of "perceptual-motor" development programs, all started by the writings of Doman-Delacato programs for children with "learning difficulties." Careful investigation has, to my knowledge, not been able to demonstrate that these programs, in their many varieties, have accomplished what they claim to. Glass also mentions one other situation in which three reading programs — a "traditional" program, a "phonics" program, and a control condition — were tested by broadcasting lessons to fetuses via special intra-uterine speakers that were called "fetoscopes." Sure enough, the two experimental programs resulted in significantly greater reading performances than did the control condition (with random noise) when the subsequently-born children had reached third grade. Of course, the author was bombarded with requests for plans for the "fetoscope," and individuals appeared ready to initiate programs using the devices as soon as they could be made available. Of course, the experiment was a hoax, the tip-off of which was the last statement in the research report: "Don't believe everything you read." I think we have somewhat the same situation operating today with the perceptual-motor programs and with movement education, and my bias is to consider these programs somewhat more skeptically until we do the work of testing their effectiveness.

Let me apologize for that digression and move on. The third difficulty I have seen with the

assumption about children's movement experiences providing building blocks for later use is that a number of lines of evidence in the motor behavior field appear to contradict it. One very common finding is that the transfer among even very similar appearing motor tasks (such as two speeds of rotation of the pursuit rotor, for example) is incredibly low. The more the tasks differ, naturally, the less the transfer, to the point where there is nearly *no* transfer among different skills that appear to be related by some hypothesized fundamental underlying ability, e.g., the "balancing" abilities underlying the Bachman ladder task and the stabilometer are apparently different enough that there is no transfer of learning between these two "balance" tasks. If low-positive transfer is the rule for motor skills, then one must wonder about the expectation that there be massive transfer from the activities utilized to form the basic "building blocks" in movement education programs to the tasks in which these "building blocks" are later to be used. Unless the movement experiences use performances which are nearly identical to those used in the task to which the elements are intended to transfer, the evidence about transfer suggests that this aspect of movement education programs will not fulfill its expectation.

A related concern is with the well-demonstrated specificity of motor skills. It has been known for a long time that motor tasks are highly specific, as evidenced by the fact that the correlations among very similar motor tasks are extremely low. Franklin Henry and his students have been very active in establishing these relationships. This is related to the concern about transfer because if two tasks have so little in common that they do not correlate, then there is serious doubt that there are sufficient elements in common to allow transfer among them. Thus, the lack of correlation among skills makes it doubtful that movement experiences of various types will enable the "building blocks" learned therein to transfer to tasks attempted in later life.

In summary, the lack of direct evidence about the usefulness of movement education programs, when added to the indirect evidence from motor behavior research on adults concerning the specificity and transfer of motor skills, leads to a very pessimistic view that movement education — at least the part of movement education that deals with basic movements — does what it claims to do. My friends and I, smug in the belief that the research in specificity and transfer would tell us what we needed to know about movement education, have had many a hearty laugh at those who believed so strongly in movement education. But, fortunately, we have become mellower and more tolerant with age, and I now see some other lines of evidence, and some very recent theorizing that is supported by hard experimental findings, that seem to require a revision of our earlier thinking about movement education. A key event for the change in my personal point of view was my work leading to the development of the schema theory. Let me take a few minutes to describe the theory briefly, hopefully then showing how the theory is related to the movement education notion.

The Schema Theory

Assumptions

It is beyond the scope of this talk to discuss either the origins of the schema theory or the theory itself in any great detail, and for a complete treatment, the interested reader should consult Schmidt (1975, 1976); thus, only enough of the basic idea to enable an understanding of the movement education notion will be presented.

Essentially, the schema theory was developed because of two basic difficulties with various theories as they existed in 1974. First, and foremost, was a dissatisfaction with Adams' (1971) closed-loop theory of motor learning. Adams' notion was limited to slow, graded, linear positioning responses, and I sought to extend the theoretical coverage to ballistic as well as slow movements, with a strict limitation in coverage to discrete movements. In doing so, a number of shortcomings of Adams' theory emerged, and modifications in the new theory were made to correct these shortcomings and to account for new data that had been presented since Adams' theory was originally introduced.

A second difficulty with the existing theories at the time was really two-pronged. First, all of the theories had trouble handling the fact that subjects can produce movements that they have not produced previously — i.e., novel movements. There is little doubt that we *can* produce such movements quite easily; in fact, it is probably safe to say that almost all of the movements we perform are "novel" in the sense that initial conditions surrounding the movement, and the exact way in which the movement is carried out, have not been present

in exactly that way before. The theoretical difficulty is that earlier theories postulated a motor program (or some variant of it for open-loop theories) or a reference of correctness against which feedback is compared (for closed-loop theories) for each movement that the subject will make. If this is the case, where does the program or reference of correctness come from if the movement has never been performed previously? This leads to the second problem — the storage problem. Because each of the nearly infinite number of movements must have a motor program or reference of correctness stored in memory associated with it, a nearly infinite capacity in memory is required. I find it unparsimonious to think of motor memory structured in this way, and the novelty and storage problems are the primary reasons why.

The schema theory solves these problems by assuming that movement is carried out by a program, as other theories have as well, but that the program is "generalized." Thus, a given program can be run off in a number of ways to account for a number of variations in the initial conditions surrounding the motor act and the slight variations in the way the movement is to be performed. Thus, in order to run off the program, response specifications must be chosen that determine *how* the program is to be carried out; for example, the program could be run off rapidly or slowly, with great force or with little force, or in slightly different planes of movements (overarm throw versus sidearm throw). The analogy is the computer that can, for example, calculate means and variances. One program can, with the addition of parameters that specify the number of subjects and the number of variables, be run off in a large number of ways.

A word or two about the nature of the motor program is in order before we go any further. I have adopted the point of view that we should consider the program in the simplest way possible, hoping to generate some research to test this simple view; if the research indicates that this initial view is too simple to account for the empirical facts, then the program notion should be complicated accordingly. The simplest view that seems to account for the present facts is analogous to a phonograph record, with the "record" controlling movement for at least 200-300 msec, and perhaps for as long as 1 or 2 sec in well practiced movements. The idea is that the program must specify (a) which muscles contract, (b) in what order, (c) with what force, and (d) with what temporal pattern. Given a program stored in memory that has these characteristics, the program could be run off rapidly or slowly, maintaining the temporal and spatial structure in much the same way as the phonograph record could be run

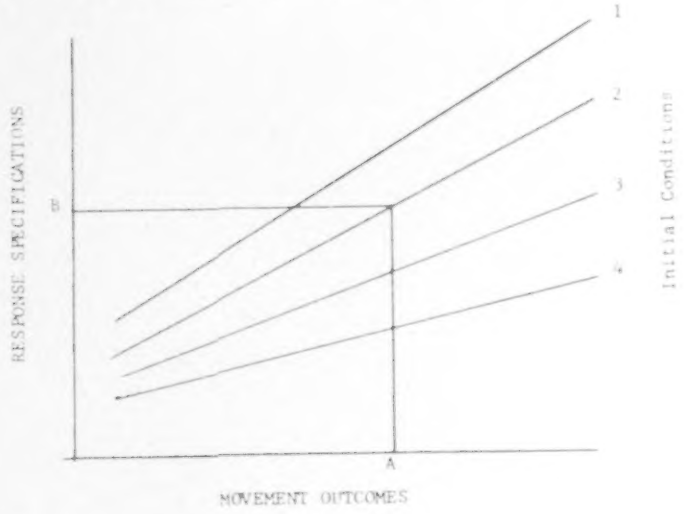

Figure 1. Hypothetical relationship (the schema) between response specifications and movement outcome, as modified by the initial conditions.

off at different speeds by changing the speed of rotation of the turntable. Also, the program could be run off with different intensities by changing the force of the preprogrammed contractions as a whole; this is, of course, analogous to the idea that the record can be run off with a different volume. Research is currently under way in our laboratory to evaluate this kind of view of motor programming, and we should know rather quickly whether this simple view will account for the data.

But it is far too easy to theorize that the program might be like a phonograph record; what must be done is to specify, in a way that can be tested in the laboratory, how the subject chooses the response specifications (the parameters) that define how the program is to be run. This is where the notion of the schema comes in. In the schema theory, two schemas are postulated — one for response production (recall) and one for response evaluation (recognition). Because of time limitations, I shall confine my remarks this afternoon to the response production side. The notion is that every time a movement is produced the subject stores four things: (a) the response specifications that he used to run the motor program, (b) the sensory consequences of the movement (i.e., the response-produced feedback), (c) the initial conditions that existed when the movement was carried out (orientation in space, size and weight of objects to be propelled, etc.), and, most importantly, (d) the outcome of the movement (i.e., what happened in the environment). In the case of the recall (response production schema) the subject, over the course of many such movements, abstracts a relationship between the initial conditions, the response specifications, and the outcome of the movement. So far as is known, there are no actual regression lines in memory, but I find it helpful to conceptualize the abstraction process using this statistical concept as shown in Figure 1.

The figure gives the hypothetical relationship in memory between the initial conditions, the movement outcome, and the response specifications, and this relationship *is* the recall schema. Essentially, the schema is the relationship between what the subject ordered himself to do (the response specifications) and what happened in the environment as a result of these orders (the movement outcome), for different initial conditions of the response. Although we have no evidence on this point, the schema is probably established over the course of years of practice at various similar tasks, and the largest contribution to the schema probably occurs in childhood.

Now here is how the schema is proposed to "work." When the subject wants to make a movement — even one that he has not produced previously — the subject first selects the program for the particular class of movement. Let's say that the task is to shove a shuffleboard puck to a target some 30 ft. away. The subject selects the generalized program for this class of movement, and then uses the associated schema to define how the program is to be run. In this case, movement outcome can be considered as the distance to be pushed (30 ft.), and the subject "enters" the schema on the abscissa (Point A) at this value. Then, the subject notes the initial condition (let's say initial condition number 2) of the movement in terms of his own body orientation and the size of the puck, and selects the appropriate line (number 2) representing those initial conditions. Given these two actions, the subject can determine the best estimate of the response specifications for the program from the relationship, and we see from the figure that the subject has chosen response specifications indicated by Point B. Given the selection of the appropriate response specifications, the subject now runs off the program. Notice that there is no necessity that the program has ever been run in exactly that way previously — i.e., with those initial conditions and movement outcome (or goal) — thus enabling the subject to produce a novel movement.

Let me mention a couple of distinguishing features of the theory. First, the theory is essentially open loop, with strong emphasis on the role of the motor program (as compared to the use of feedback processes as with Adams, 1971) in the production of movement. I see learning as the generation of "bigger and better" motor programs that carry out movement without the need for feedback modification during movement. Along with this is the strengthening of the schemas that define how the program is to be run. The end result is that the highly practiced subject can select a program and the response specifications (via the processes described above) in a very accurate way, so that he has confidence that the movement will be successful in achieving the environmental goal. This enables the subject to essentially ignore feedback during the movement, which frees the subject's attention for use in higher-order decision making (e.g., the complex strategies in a game). A second feature is the role of errors in learning. With many theories, errors are regarded as "evil,"

actually detracting from the strength of one's movement capabilities (e.g., Adams, 1971). The schema theory, however, sees an error as just another movement that has the same underlying relationship between response specifications, movement outcomes, and initial conditions as does a correct movement; thus an error is seen as strengthening the schema conceptualized in Figure 1 rather than detracting from it. Finally, the subject must have information about movement outcome (either from direct visual or kinesthetic confirmation of the movement outcome — e.g., landing on one's back in a dive) or from artificially provided movement information usually termed "knowledge of results" (KR). Because the development of the schema is dependent upon this piece of information after a trial, movements in which this information is not available will not result in any learning. This is, of course, in keeping with the evidence about KR from laboratory studies in motor learning.

One Key Prediction — Practice Variability

One important prediction of the schema theory concerns the role of variability in practice; here comes the relevance to movement education, where activities are structured with as much variability as possible. According to the theory (see Figure 1), the more different outcomes one produces, and the more different the initial conditions in those movements, the stronger will be the recall schema. An analogy is the regression line; we know that increasing the range of values (e.g., the range of values along the abscissa in Figure 1) will provide a regression line with a smaller standard error of prediction (predicting the response specifications) than will limiting the range. Thus a key prediction — one that I want to concentrate on for the remainder of the talk — is that increased variability in experience will result in increased transfer to (i.e., more proficiency at) a novel response of the same class. This prediction was the motivation for a number of experiments performed lately, and I would like to describe two of the more pertinent ones to you next.

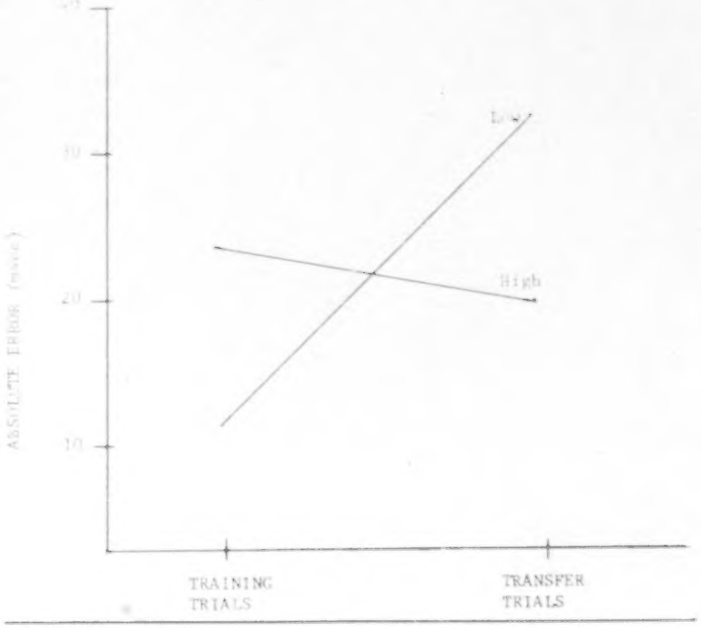

Figure 2. Absolute error on the 50-cm task for high- and low-variability groups under the training and transfer conditions (From McCracken & Stelmach, in press)

Hugh McCracken and George Stelmach of Wisconsin asked subjects to move a slide ballistically along a trackway so that the time between two switches on the track was as close to 200 msec as possible (McCracken & Stelmach, in press). One group of subjects received high variability in practice, attempting to produce the 200-msec movement time with movements of four different lengths (65, 60, 35, and 15 cm) randomly ordered for 300 trials with KR. A second group of subjects with low practice variability received 300 trials with only one movement length. Following the 300th trial, all subjects transferred to a movement length of 50 cm which they had never performed previously; thus, the experiment provided an analysis of the effect of movement variability on the transfer to a novel member of the response class, and the schema theory predicts strongly that subjects with high variability should show superior performance to those subjects with low variability. The essential results are shown in Figure 2. Considering the last 30 trials of training (in which the amount of variability was being manipulated as described above), the average timing error was considerably larger for the high-variability as compared to the low-variability group. This is certainly not surprising, as it says what we think we have known for a long time. If the task is "closed" (like bowling) where only one movement is required, it is far more effective to practice that one movement than to practice a number of similar movements; the low-variability groups were better at performing the one response practiced. But now consider the errors on the attempts at the novel movement in the transfer phase. Notice that the more effective group was the high-variability group. This says that the subjects with lots of practice variability are more effective at producing a novel movement than are subjects with low variability. The implication is that if the task is "open" (like in being a shortstop in baseball), then it is far better to practice a variety of responses because one never knows what particular movements will be required in the game. This last finding supports the predictions of the schema theory that variability in practice is a strong variable in determining transfer to a novel motor response of the same class.

A second experiment was conducted by a student of ours at USC named Mara Hunter (Note 2). Under the assumption that schemas are probably formed more easily in children for a given amount of practice than for adults, she sought to test the variability of practice

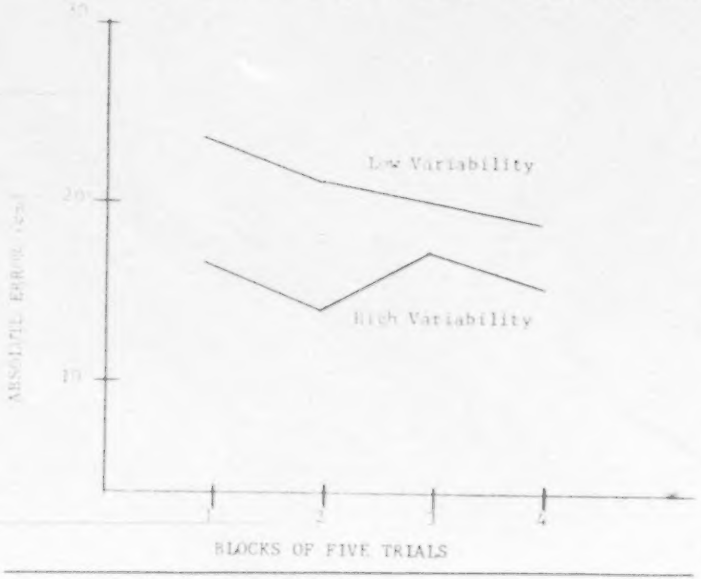

Figure 3. Absolute error on a novel task for the high- and low-variability groups over four five-trial blocks.

phenomenon with kindergarteners. The task was to shove a car down a ball-bearing trackway, allowing it to coast to a stop at a marker which could be from 60 to 200 cm away. As with McCracken and Stelmach, one group of subjects received high variability, performing at eight different movement distances, while a limited-variability group performed an equal number of trials to a single distance. Then all subjects transferred to a target that they had never attempted before, and Figure 3 shows the absolute errors in achieving this novel target as a function of trial blocks. Notice that the high-variability group performed initially with smaller errors, and that they maintained this superiority over the course of 20 trials. These data provided additional support for the prediction about variability in practice in children, and represented the first data I know of that substantiate the movement education prediction that a variety of movement experiences provides an increased capacity to move in novel situations.

I think that these results are important for a number of reasons. First, they provide support for one of the key predictions of the schema theory — predictions that cannot be made from "rival" theories such as that of Jack Adams (1971). But second, and most important for the present purposes, the data provide experimental verification that a variety of movement experiences produces an increased capacity to move — an assumption typically seen in the goals of movement education programs. Closely related to this is the fact that the schema theory was not developed with movement education in mind at all, but was developed to provide an explanation of the things we commonly see in the laboratories with human adult subjects. It should be comforting to movement education people, I should think, that a data-based theory predicts that some of the movement-education outcomes should hold. Finally, there is now the beginning of theory in movement education upon which to base one's program planning decisions and to guide future research.

Some Future Directions

What kinds of research in movement education, and in children's movement behavior in general, might contribute most to an understanding motor behavior in children? One important line of work suggested by the schema theory is to consider the basic structure of the motor program. Specifically assuming that we now know that increased variability in practice improves the capacity to move, along what dimensions should the variability be structured so as to be maximally consistent with what we know about the structure of the motor program? I should like at this point to discuss some potential candidates for the dimensions along which the program can vary, mentioning the implications for movement education as I go along.

Timing

The leading candidate for a dimension along which the program can vary is timing. This idea states that the program can be run off at various speeds without changing the basic structure of the sequence and temporal relationships among the motor commands, and there is a lot of evidence suggesting that this idea is correct. A paper by Brooks (1974) describes an experiment in which monkeys were trained to slam a handle back and forth between two stops as quickly as possible. Suddenly, the inter-stop distance was decreased during a sequence; when this happened, the monkey continued to produce the oscillatory movements with the same timing pattern, pressing the lever aganist the now-closer stop for the same amount of time that he would have spent in moving to the original stop and reversing the movement. It was as if the program of action had timing inherent in it much as if the movements were controlled by a phonograph record as mentioned previously.

Additional support comes from some work with humans. Armstrong (Note 1) had subjects learn a pattern of arm-controlled lever movement defined in space and time. He noticed that when the movement was performed too rapidly, the entire movement was speeded up as a whole. That is, the temporal intervals between the various events in the movement remained proportional, much as one would expect if the movement were controlled by a phonograph record that was run off too rapidly. An interesting research strategy has been provided by Summers (1975) and later by a student in our lab named Diane Shapiro (1976). They both had subjects learn a pattern of movement with particular timing characteristics, and considerable practice on this spatial-temporal pattern was provided. Then in a transfer task, the subjects were told to ignore the timing, and to produce the pattern of movement as quickly as possible. When subjects sped up the movement, they could not

eliminate the temporal aspects of the movement they had learned previously, and the faster movements appeared to be speeded-up copies of the original movement. All of this evidence suggests that timing is inherent in the motor program, and that subjects are able to run off the program with various speeds.

A clear implication for movement education is that, if timing is a dimension along which movements can be varied while using the *same* motor program, then perhaps lessons that vary the movement experiences along the speed dimension will prepare students for future attempts at that movement class most effectively. An effective method, according to this thinking, would be to define particular movement patterns, and have students carry them out at varying speeds, being careful to hold constant the spatial characteristics of the movement to ensure the utilization of a single motor program. Perhaps some programs do this now, but the reasons have never been clearly motivated by theory.

Force Characteristics

A second possible dimension along which the program might be varied is the amount of force with which the various contractions are produced. This idea comes from the phonograph record analogy as explained earlier, and it is conceptually simple to imagine the *same* program being used to propel a heavy shuffleboard puck and a light one, with the only difference being in the amount of force being required for the various contractions. A psychologist and good friend at the University of Michigan, Dick Pew (Note 3), used to take his class to the Detroit Post Office to observe the motor behavior of the postal workers. One thing we noticed concerned those individuals who received small packages from a conveyor, having the task of tossing them into the correct bin for subsequent delivery. What these people appeared to do was to "heft" the package to determine its mass (and perhaps other flight characteristics like wind resistance), and then execute a nearly perfect and consistent "set shot" to the proper bin. In terms of the schema theory, what they appeared to do was to determine the initial conditions (the mass of the object, the distance to be tossed, etc.), then select (via the schema) the response specifications for the "set-shot" program, finally running off the program with great precision of outcome. If so, this says that the same program can be run with various forces, with force being one dimension along which the program can be varied. There is, however, very little experimental evidence for this contention, but it is the target of some research we are going to do this summer.

Implications for movement education are that variability in practice should be carried out along the dimension of force production. Being careful to maintain the same movement pattern in terms of space and time, the performance of tasks with a variety of force requirements should enrich the schema for the movement class under consideration, allowing increased transfer to a novel member of the same class in the future.

Spatial Characteristics

A third possibility for a dimension along which the program can vary is in terms of its spatial characteristics. The "classic" example in this area is handwriting. We all know, I think, that we can sign our name on the blackboard with a height of 12 in., or on a check with a height of .5 in., and in each case the signature is recognized as "ours." Merton (1972) published some pictures of blackboard-sized and paper-and-pencil sized handwriting, adjusted to the same size by magnification, and it is remarkable how similar the movement patterns are. The implications are that the same spatial-temporal pattern of movement can be produced in a variety of movement sizes. This is particularly remarkable in light of the fact that the muscles and joints used to produce paper-and-pencil handwriting (in the fingers primarily) and those used on the blackboard (in the arm and shoulder) are entirely different. Somehow, the system has learned a movement pattern, and it is capable of translating this pattern into marks on a blackboard or paper, using various muscles and joints, very well on the basis of past experience.

In terms of movement education, one could consider varying the movement experiences along the dimension of response size or other spatial characteristics, while holding constant the temporal characteristics so that the same motor program could be used. For example, diving over objects of various heights, or throwing with overarm or sidearm motions, are possible methods of varying movement along this dimension.

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A Word of Caution

It is certainly risky to attempt to apply such loose implication from theory to practice in movement education, and there is considerable risk of being incorrect in a number of ways. One major difficulty I see in attempting to use these principles in movement education settings is that teachers will think that the motor programs subserve a far wider range of movements than might actually be the case. For example, if the phonograph record analogy is correct, this provides a very closely controlled temporal and spatial structure of the sequences of muscle commands — a sequence which might only be useful for a very narrow class of movement behavior. I would not be surprised if even a task like shuffleboard might not be governed by a single motor program, but that very short movements and very long ones might be controlled by separate motor programs. Thus, the teacher should be prepared to consider that the number of programs might be very large indeed, and that when experiences are varied in movement education, what might be happening is that the various movements are being controlled by separate programs rather than by different ways of operating a given motor program. This is important, because if the schema for a given program is to be strengthened by such activity, we must be careful to choose movements that are governed by the same program, but whose executions comes about via different response specifications; only then can, according to theory, the schemas for movement be strengthened. How broad the class of movements governed by a given motor program might be is certainly a good question, and we don't have a very good idea right now about its answer. But we must consider the fact that movements that look very similar do not correlate very well, and they do not show much transfer, leading to the possibility that they are governed by different motor programs. Methods are available for determining the span of motor program, and this will be the subject of some data to be collected in our lab this summer.

Some Final Remarks

I'm excited about the possibilities that the recent developments in research, including the development of a number of theories such as the schema theory, might have on movement education. First, they will certainly provide some support for existing practices — support that has always been severely lacking; this lack has detracted, in my opinion, from the "believability" of movement-education programs. Second, the findings and predictions from theory will not always agree well with current practice in movement education, and the direction provided by the research now has a real possibility of providing leadership for constructive modifications of existing program structures. But third — and I see this as the most important of all — I hope that ideas like the schema theory will be helpful in generating research by those engaged in children's motor behavior. Often, it seems that areas of study lie dormant until key experiments are done or theories that can account for the data are proposed; following those events, we often see a great flurry of research activity along the lines suggested by the experiment or theory. It would certainly excite me to know that the schema theory could become useful to practitioners by stimulating their own research.

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